VSP 112W

User Manual

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- Revision: V1.5

VSP 112W·User Manual

Thank you for choosing our products!
In order to allow you to learn how to use the video processor quickly, we bring you the detailed user manual. You can read the introduction and directions before using the video processor, please read all the information we provide carefully to use our products correctly.

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Operators Safety Summary

The general safety information in this summary is for operating personnel.

Do Not Remove Covers or Panels

There are no user-serviceable parts within the unit. Removal of the top cover will expose dangerous voltages. To avoid personal injury, do not remove the top cover. Do not operate the unit without the cover installed.

Power Source

This product is intended to operate from a power source that will not apply more than 230 volts rms between the supply conductors or between both supply conductor and ground. A protective ground connection by way of grounding conductor in the power cord is essential for safe operation.

Grounding the Product

This product is grounded through the grounding conductor of the power cord. To avoid electrical shock, plug the power cord into a properly wired receptacle before connecting to the product input or output terminals. A protective-ground connection by way of the grounding conductor in the power cord is essential for safe operation.

Use the Proper Power Cord

Use only the power cord and connector specified for your product. Use only a power cord that is in good condition. Refer cord and connector changes to qualified service personnel.

Use the Proper Fuse

To avoid fire hazard, use only the fuse having identical type, voltage rating, and current rating characteristics. Refer fuse replacement to qualified service personnel.

Do Not Operate in Explosive Atmospheres

To avoid explosion, do not operate this product in an explosive atmosphere.

Terms in This Manual and Equipment Marking

WARNING

Highlight an operating procedure, practice, condition, statement, etc, which, if not strictly observed, could result in injury or death of personnel.

Note

Highlights an essential operating procedure, condition or statement.

CAUTION

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

Amendment Records

The table below lists the changes to the Video Processor User Manual.

Format	Time	ECO#	Description	Principal
V1.0	2011-12-21	0000	Release	BIN
V1.1	2012-10-12	0001	Change the output interface.	BIN
V1.2	2013-02-01	0002	Update the user manual format.	BIN
V1.3	2013-07-01	0003	1. Menu update. 2. Change the Back and front Panel. 3. Update Software. 4. Add program editing function.	Vira
V1.4	2013-08-10	0004	1. Change the product name. 2. Change the Back and front Panel. 3. Add “Supported 3G USB Adaptor, WIFI and VPN router List”. 4. Add Brightness&Temperatures Sensor Specification.	Vira
V1.5	2013-08-10	0005	1.Add USB1 and USB2 prioritize function-p27 2.Add SD card and USB prioritize function- P27 3.Add How to Connect PC Through LAN Interface?-p73	peter

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1. Brief Introduction

This chapter is designed to introduce you to the VSP 112W User Manual. Areas to be covered are:

- Chapter Structure
- How to Use The Manual
- Terms and Definitions
- System Overview
- Application Questions

Chapter Structure

The following chapters provide instructions for all aspects of VSP 112W operations.

Chapter 1 Brief Introduction

Chapter 2 Hardware Orientation

Chapter 3 Hardware Installation

Chapter 4 Menu Orientation

Chapter 5 Communication Software Guideline

Chapter 6 System Setup and Operations

Chapter 7 Common Questions and Solution

Appendix A Specification

Appendix B Contact Information

Appendix C Sending Card Wire Bonding Steps

How to Use the Manual

Followings are important tips for streamlining your use of this User Manual in its electronic “PDF” form.

Navigation

Use Acrobat Reader’s “bookmarks” to navigate to the desired location. All chapter files have the same bookmark structure for instant navigation to any section. Please note:

- Extensive hyperlinks are provided within the chapters.
- Use Acrobat’s “**Go to Previous View**” and “**Return to next View**” buttons to trace your complete navigational path.

- Use the “**Previous Page**” and “**Next Page**” buttons to go to the previous or next page within a file.
- Use Acrobat’s extensive search capabilities, such as the “**Find**” tool and “**Search Index**” tool to perform comprehensive searches as required.

Table of Contents and Index

Use the Table of Contents bookmarks to navigate a desired topic. Click any item to instantly jump to that section of the guide. You can also use the **Index** to jump to specific topics within a chapter. Each page number in the **Index** is a hyperlink.

General Operations

To ensure trouble-free operation, please follow all procedures as listed below:

- For detailed installation instructions, refer to chapter 3 “Hardware Installation” on page 33.
- For communication software control guide, refer to Chapter 5, “Communication Software Control Guide” on page 49.
- For system setup and operations, refer to Chapter 6, “System Setup and Operations” on page 74.

Should you have any questions regarding the installation or operation of VSP 112W, please consult with the factory. Refer to Appendix B “Contact information” on page 119.

Term and Definitions

The following terms and definitions are used throughout this guide.

- **“ASCII”:** American Standard for Information Interchange. The standard code consisting of 7-bit coded characters (8 bits including parity check) used to exchange information between data processing systems, data communication systems, and associated equipment. The ASCII set contains control characters and graphic characters.
- **“Aspect ratio”:** The relationship of the horizontal dimension to the vertical dimension of an image. In viewing screens, standard TV is 4:3, or 1.33:1; HDTV is 16:9, or 1.78:1. Sometimes the “:1” is implicit, making TV = 1.33 and HDTV = 1.78.
- **“AV”:** Audio visual or audio video.
- A **“Background”** is an unscaled source, typically originating from a computer. A background source appears at the system’s lowest priority — visually in back of all other sources.
- **“Baudrate”：** Named of J.M.E. Baudot, the inventor of the Baudot telegraph code. The number of the electrical oscillations per second, called baud rate. Related to, but not the same as, transfer rate in bits per second (bps).
- **“Blackburst”:** The video waveform without the video elements. It includes the vertical sync, horizontal sync, and the chroma burst information. Blackburst is used to synchronize video equipment to align the video output. One signal is normally used to set up an entire video system or facility. Sometimes it is called House sync.
- **“BNC”:** Bayonet Neill-Concelman. A cable connector used extensively in television and named for its inventors. A cylindrical bayonet connector that operates with a twist-locking motion. To make the connection, align the two curved grooves in the collar of the male connector with the two projections on the outside of the female collar, push, and twist. This allows the connector to lock into place without tools.
- **“Brightness”:** Usually refers to the amount or intensity of video light produced on a screen without regard to color. Sometimes called “black level.
- “**CAT 5**”**:** Category 5. Describes the network cabling standard that consists of four unshielded twisted pairs of copper wire terminated by RJ-45 connectors. CAT 5 cabling supports data rates up to 100 Mbps. CAT 5 is based on the EIA/TIA 568 Commercial Building Telecommunications Wiring Standard.
- **“Color bars”:** A standard test pattern of several basic colors (white, yellow, cyan, green, magenta, red, blue, and black) as a reference for system alignment and testing. In NTSC video, the most commonly

- Used color bars are the SMPTE standard color bars. In PAL video, the most commonly used color bars are eight full field bars. In the computer, the most commonly used color bars are two rows of reversed color bars.
- **"Color burst":** In color TV systems, a burst of sub carrier frequency located on the back porch of the composite video signal. This serves as a color synchronizing signal to establish a frequency and phase reference for the chroma signal. Color burst is 3.58 MHz for NTSC and 4.43 MHz for PAL.
- **"Color temperature":** The color quality, expressed in degrees Kelvin (K), of a light source. The higher the color temperature, the bluer the light. The lower the temperature, the redder the light. Benchmark color temperature for the A/V industry includes 5000°K, 6500°K, and 9000°K.
- **"Contrast ratio":** The radio of the high light output level divided by the low light output level. In theory, the contrast radio of the television system should be at least 100:1, if not 300:1. In reality, there are several limitations. In the CRT, light from adjacent elements contaminate the area of each element. Room ambient light will contaminate the light emitted from the CRT. Well-controlled viewing conditions should yield a practical contrast ratio of 30:1 to 50:1.
- **"DVI":** Digital Visual Interface. The digital video connectivity standard that was developed by DDWG (Digital Display Work Group). This connection standard offers two different connectors: one with 24 pins that handles digital video signals only, and one with 29 pins that handles both digital and analog video.
- **"EDID":** Extended Display Identification Data – EDID is a data structure used to communicate video display information, including native resolution and vertical interval refresh rate requirements, to a source device. The source device will then output the optimal video format for the display based on the provided EDID data, ensuring proper video image quality. This communication takes place over the DDC – Display Data Channel.
- **"Ethernet":** A Local Area Network (LAN) standard officially known as IEEE 802.3. Ethernet and other LAN technologies are used for interconnecting computers, printers, workstations, terminals, servers, etc. within the same building or campus. Ethernet operates over twisted pair and over coaxial cable at speeds starting at 10Mbps. For LAN interconnectivity, Ethernet is physical link and data link protocol reflecting the two lowest layers of the OSI Reference Model.
- **"Frame":** In interlaced video, a frame is one complete picture. A video frame is made up of two fields, or two sets of interlaced lines. In a film, a frame is one still picture of a series that makes up a motion picture.

1. Brief Introduction

Terms and Definitions

- **“Gamma”:** The light output of a CRT is not linear with respect to the voltage input. The difference between what you should have and what is actually output is known as gamma.
- **“HDMI” - High – Definition Multimedia Interface:** An interface used primarily in consumer electronics for the transmission of uncompressed high definition video, up to 8 channels of audio, and control signals, over a single cable. HDMI is the de facto standard for HDTV displays, Blu-ray Disc players, and other HDTV electronics. Introduced in 2003, the HDMI specification has gone through several revisions.
- **“HDSDI”:** The high-definition version of SDI specified in SMPTE-292M. This signal standard transmits audio and video with 10 bit depth and 4:2:2 color quantization over a single coaxial cable with a data rate of 1.485 Gbit/second. Multiple video resolutions exist including progressive 1280x720 and interlaced 1920x1080 resolutions. Up to 32 audio signals are carried in the ancillary data.
- **“JPEG” (Joint photographic Expects Group):** Commonly used method of loss compression for photographic images using a discreet cosine transfer function. The degree of compression can be adjusted, allowing a selectable tradeoff between storage size and image quality. JPEG typically achieves 10:1 compression with little perceptible loss in image quality. Produces blocking artifacts.
- **“MPEG”:** Motion Picture Expect Group. A standard committee under the auspices of the International Standards Organization working on algorithm standards that allows digital compression, storage and transmission of moving image information such as motion video, CD-quality audio, and control data at CD-ROM bandwidth. The MPEG algorithm provides inter-frame compression of video images and can have an effective compression rate of 100:1 to 200:1.
- **“NTSC”:** The color video standard used in North America and some other parts of the world created by the National Television Standards Committee in the 1950s. A color signal must be compatible with black-and-white TV sets. NTSC utilizes an interlaced video signals, 525 lines of resolution with a refresh rate of 60 fields per second (60 Hz). Each frame is comprised of two fields of 262.5 lines each, running at an effective rate of 30 frames per second.
- **“PAL”:** Phase Alternate Line. A television standard in which the phase of the color carrier is alternated from line to line. It takes four full pictures (8 fields) for the color-to-horizontal phase relationship to return to the reference point. This alternation helps cancel out phase errors. For this reason, the hue control is not needed on a PAL TV set. PAL, in many transmission forms, is widely used in Western Europe, Australia, Africa, the Middle East, and Micronesia. PAL uses 625-line,

50-filed (25 fps) composite color transmission system.

- **“Operator”:** Refers to the person who uses the system.
- **“PIP”:** Picture-in-Picture. A small picture within a larger picture created by scaling down one of the images to make it smaller. Each picture requires a separate video source such as a camera, VCR, or computer. Other forms of PIP displays include Picture-by-Picture (PBP) and Picture-with-Picture (PWP), which are commonly used with 16:9 aspect display devices. PBP and PWP image formats require a separate scaler for each video window.
- **“Polarity”:** The positive and negative orientation of a signal. Polarity usually refers to the direction or a level with respect to a reference (e.g. positive sync polarity means that sync occurs when the signal is going in the positive direction).
- **“RJ-45”:** Registered Jack-45. A connector similar to a telephone connector that holds up to eight wires used for connecting Ethernet devices.
- “**RS-232”:** An Electronic Industries Association (EIA) serial digital interface standard specifying the characteristics of the communication path between two devices using either DB-9 or DB-25 connectors. This standard is used for relatively short-range communication and does not specify balanced control lines. RS-232 is a serial control standard with a set number of conductors, data rate, word length, and type of connector to be used. The standard specifies component connection standards with regard to the computer interface. It is also called RS-232-C, which is the third version of the RS-232 standard, and is functionally identical to the CCITT V.24 standard.
- **“Saturation”:** Chroma, chroma gain. The intensity of the color, or the extent to which a given color in any image is free from white. The less white in a color, the truer the color or the greater its saturation. On a display device, the color control adjusts the saturation. Not to be confused with the brightness, saturation is the amount of pigment in a color, and not the intensity. Low saturation is like adding white to the color. For example, a low-saturated red looks pink.
- **“Scaling”:** A conversion of a video or computer graphic signal from a starting resolution to a new resolution. Scaling from one resolution to another is typically done to optimize the signal for input to an image processor, transmission path or to improve its quality when presented on a particular display.
- **“SDI”:** Serial Digital Interface. The standard based on a 270 Mbps transfer rate. This is a 10-bit, scrambled, polarity independent interface with common scrambling for both component ITU-R 601 and composite digital video and four channels of (embedded) digital audio.
- **“Seamless Switching”:** A feature found on many video switchers. This

feature causes the switcher to wait until the vertical interval to switch. This avoids a glitch (temporary scrambling) which normally is seen when switching between sources.

- **"SMPTE":** Society of Motion Picture and Television Engineers. A global organization, based in the United States that sets standards for base band visual communications. This includes film as well as video and television standards.
- **"S-Video":** A composite video signal separated into the luma ("Y" is for luma, or black and white information; brightness) and the chroma ("C" is an abbreviation for chroma, or color information).
- **"Sync":** Synchronization. In video, sync is a means of controlling the timing of an event with respect to other events. This is accomplished with timing pulses to insure that each step in a process occurs at the correct time. For example, horizontal sync determines exactly when to begin each horizontal scan line. Vertical sync determines when the image is to be refreshed to start a new field or frame. There are many other types of sync in video system. (Also known as "sync signal" or "sync pulse.")
- **"TCP/IP":** Transmission Control Protocol/Internet Protocol. The communication protocol of the Internet. Computers and devices with direct access to the Internet are provided with a copy of the TCP/IP program to allow them to send and receive information in an understandable form.
- **"USB":** Universal Serial Bus. USB was developed by seven PC and telecom industry leaders (Compaq, DEC, IBM, Intel, Microsoft, NEC, and Northern Telecom). The goal was easy plug-and-play expansion outside the box, requiring no additional circuit cards. Up to 127 external computer devices may be added through a USB hub, which may be conveniently located in a keyboard or monitor. USB devices can be attached or detached without removing computer power. The number of devices being designed for USB continues to grow, from keyboards, mice, and printers to scanners, digital cameras, and ZIP drives.
- **"VESA":** Video Electronics Standards Association. A nonprofit number organization dedicated to facilitating and promoting personal computer graphics through improved standards for the benefit of the end-user. www.vesa.org
- **"VGA":** Video Graphics Array. Introduced by IBM in 1987, VGA is an analog signal with TTL level separate horizontal and vertical sync. The video outputs to a 15-pin HD connector and has a horizontal scan frequency of 31.5 kHz and vertical frequency of 70 Hz (Mode 1, 2) and 60 Hz (Mode 3). The signal is non-interlaced in modes 1, 2, and 3 and interlaced when using the 8514/A card (35.5 kHz, 86 Hz) in mode 4. It

has a pixel by line resolution of 640×480 with a color palette of 16 bits and 256,000 colors.

- **“YCrCb”:** Used to describe the color space for interlaced component video.
- **“YPbPr”:** Used to describe the color space for progressive-scan (non-interlaced) component video.

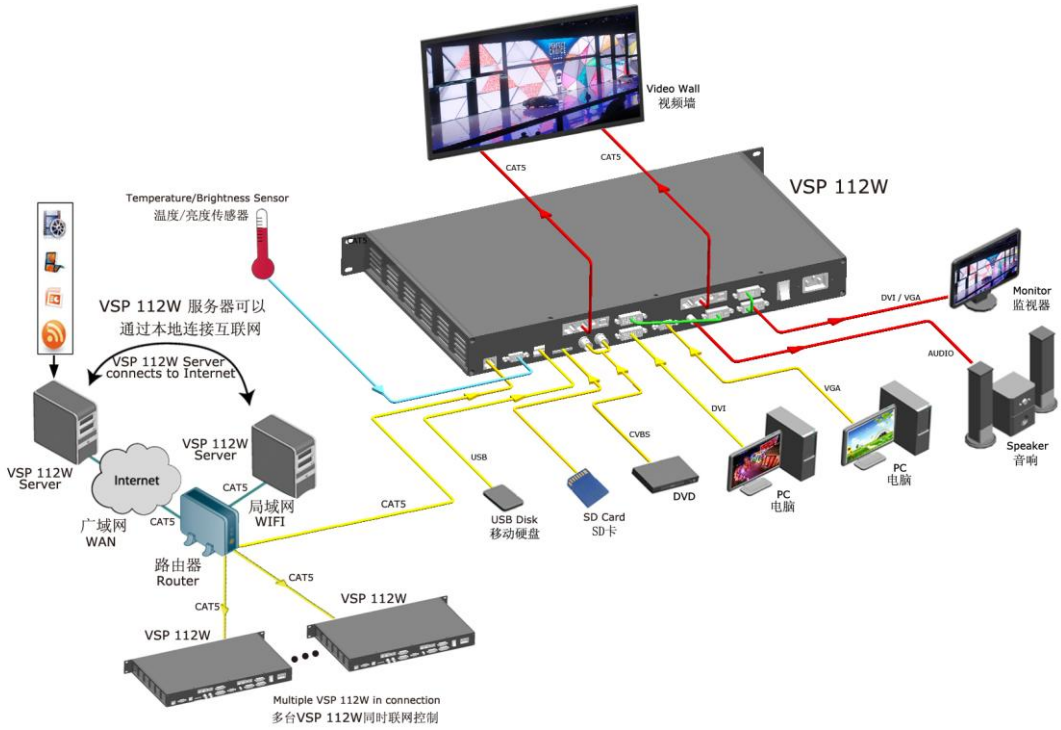
System Overview

VSP 112W is the latest in entry level LED video processing, providing basic inputs and versatile functionality for both mobile and fixed installation advertising markets. Utilizing the latest in motion adaptive de-interlacing, true color reconstruction and dynamic range adjustment technologies enables the processor to provide high quality pixel based scaling for all inputs including the integrated USB media interface.

It supports 2 composite (CVBS), 1 VGA, 1 DVI (compatible with HDMI1.3), 1 SD card, 4 USB inputs, and 1 audio, 2 DVI, 1 VGA outputs.

Application Questions

RGBlink offers solutions to demand technical problems. Any application questions, or required further information, please contact with our Customer Support Engineers. Refer to Appendix B for contact details.



2. Hardware Orientation

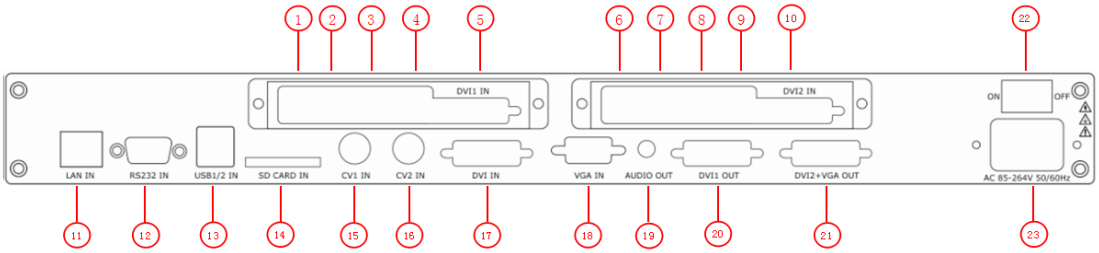
In This Chapter

This chapter provides detailed information about the VSP 112W hardware. The following topics are discussed:

- VSP 112W Back Panel
- VSP 112W Front Panel

VSP 112W Back Panel

The figure below illustrates the professional interface and control signals of VSP 112W back panel.



NO	INTERFACE	NO	INTERFACE
1.2.6.7.11	10/100M Interface RJ45	17	DVI Input DVI-I
3.8	Power supply port of Sending Card	18	VGA Input DSUB15 port
4.9	USB control port of Sending Card	19	Audio Output
5.10	DVI input port of sending card	20	DVI Output DVI-I
12	RS232 Interface	21	DVI+VGA DVI-I Output
13	USB input port	22	Switch
14	SD card input	23	Power IEC-3 port
15.16	CVBS Input BNC port		

CONT Interface

11. 10/100M Interface RJ45

12. RS232 Interface

It is used to connect the computer.

INPUT Interface

It includes 2 CVBS (BNC port), 4 USB, 1 DVI-I(compatible with the HDMI input), 1 VGA (DB15port), and 1 SD card Input.

13：USB Input

USB input interface: can access the USB device or mobile hard disk with USB storage function. Support general image and video formats. Mainly used to store video program package (USB function can only achieve when transcoding through PC, below USB1 in USB2).

Note

USB1 is master interface, USB2 is spare interface, recommend the use of a priority when USB1, not recommend for USB1 and USB2 at the same time.

14：SD Card Input

SD card input interface, it is mainly used to store video program package or application upgrade package.

Note

SD card and USB are mobile storage interface,but SD card priority is higher than USB; SD card and USB are inserted into the device , the system only play SD card, when SD card is removed ,will play USB .

15. 16：CVBS Input

CVBS input. Can receive standard video signal from players, cameras etc. Input supports resolution 480i and 576i via BNC. Support standards include: PAL, NTSC and SECAM.

17：DVI Input

DVI input interface: Input the video signal from computer, DVI signal generator. Connect to the same DVI interface on VSP 112W.

(This Connection does not support hot-plugging)

Note

DVI-I is compatible with HDMI.

18：VGA Input

VGA Interface input the video signal from HD player and Computer, etc. compatible with YPbPr signal, input signal via the DB15 interface.

OUTPUT

1.2.6.7: 10/100M Interface RJ45

Gigabit copper port, used to connect LED screen.

3. 8：Power Supply Port of Sending Card

Power has been already supplied by video processor itself, no external power supply needed.

4. 9：USB Control Port of Sending Card

5. 10：DVI Input

Input the DVI out originating from other video processors.

（This DVI connector does not support hot-plugging）

19：AUDIO Output

It is used to access the speakers or audio power amplifier system. Can be connected with the DVI output interface video processor directly.

(This connector does not support hot-plugging)

20：DVI Output

Connect to the monitor or LED screen which has DVI interface

(This DVI connector does not support hot-plugging).

21：DVI +VGA DVI Output

DVI +VGA output via DVI connector connect to the monitor or LED screen which has DVI interface.

(This DVI connector does not support hot-plugging).

2. Hardware Orientation

VSP 112W Back Panel

DVI +VGA, VGA output connector can be connected to monitor or projector which has VGA interface.

Note

Via adapter, can connect with DVI-based or VGA-based equipment, and via DVI to VGA adapter, can output VGA only.

Switch and Power

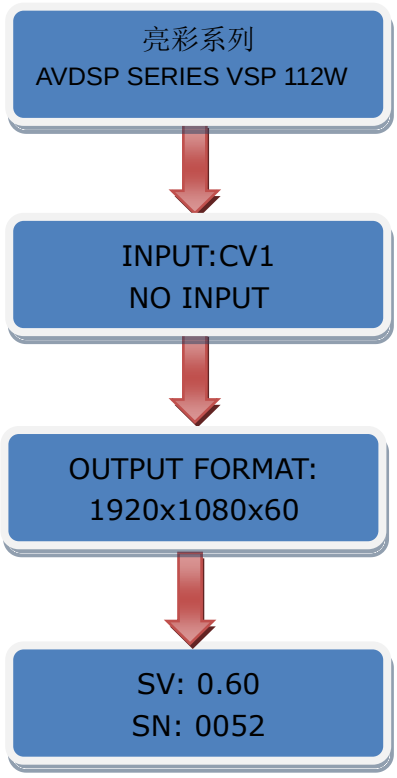
22.23：Power Interface and Switch

AC 85-264V 3.8A 50/60Hz IEC-3 Power Interface.

VSP 112W Front Panel

Insert power cord and push power to ON position. LCD module on the front panel will show device information and go into self verification before it load last setting and send processed image to the target monitor. For the first setup, CV1 input is default source. With front panel keyboard, user can operate VSP 112W through the menus on LCD panel.

VSP 112W front panel as shown in figure:

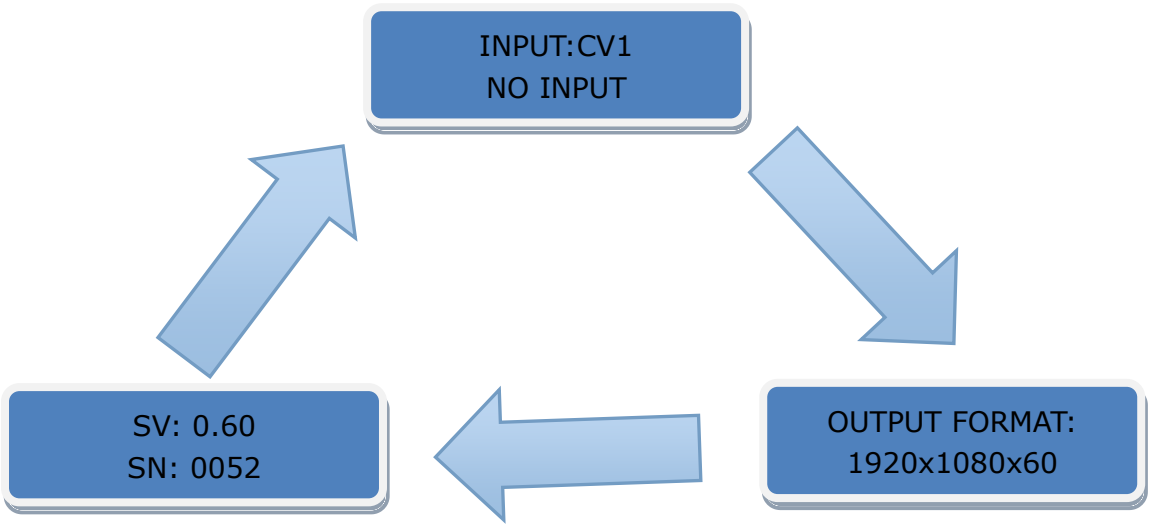


2. Hardware Orientation

VSP 112W Front Panel

System into the Circulation Statement:

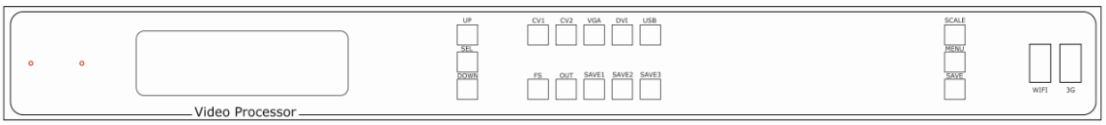
Cycle process displays the current input signal source, the current output format, the current program version information, the current equipment serial number; the user hold equipment serial number will get more effective service and support.



2. Hardware Orientation

VSP 112W Front Panel

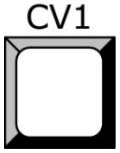
VSP 112W front panel is as following:



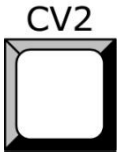
LCD Panel

Used to show button menu and menus for interactive communication；

Signal Keys

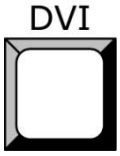


CV1 input selection button, its LED light turns on, output will be switched to this channel;



CV2 input selection button, its LED light turns on, output will be switched to this channel;

VGA input selection button, its LED light turns on, output will be switched to this channel;

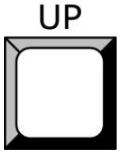


DVI input selection button, its LED light turns on, output will be switched to this channel;

USB input selection, its LED light turns on, output will be switched to this channel, and the LCD panel will show the network, WIFI, USB and SD card information.

Function Keys

Push to confirm the current choice item;

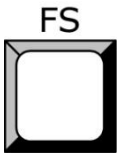


Push to select up items in LCD menu;

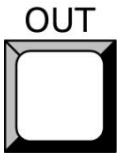
Push to select down items in LCD menu;

2. Hardware Orientation

VSP 112W Front Panel



Switch to select full size or screen size, just for single picture mode;



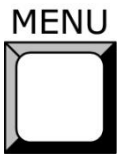
Push to select the output format by using the UP/ DOWN key.

Switch to use the user-defined mode 1;

Switch to use the user-defined mode 2;

Switch to use the user-defined mode 3;

Push to go to between scale→zoom→crop→scale mode；



Advanced menu: press the **MENU** to enter the main menu, the submenus: Device information, Factory Reset, Language and Alpha setting are all included. Push the UP/DOWN to select the relevant submenu. For details, please refer to MENU in menu orientation.

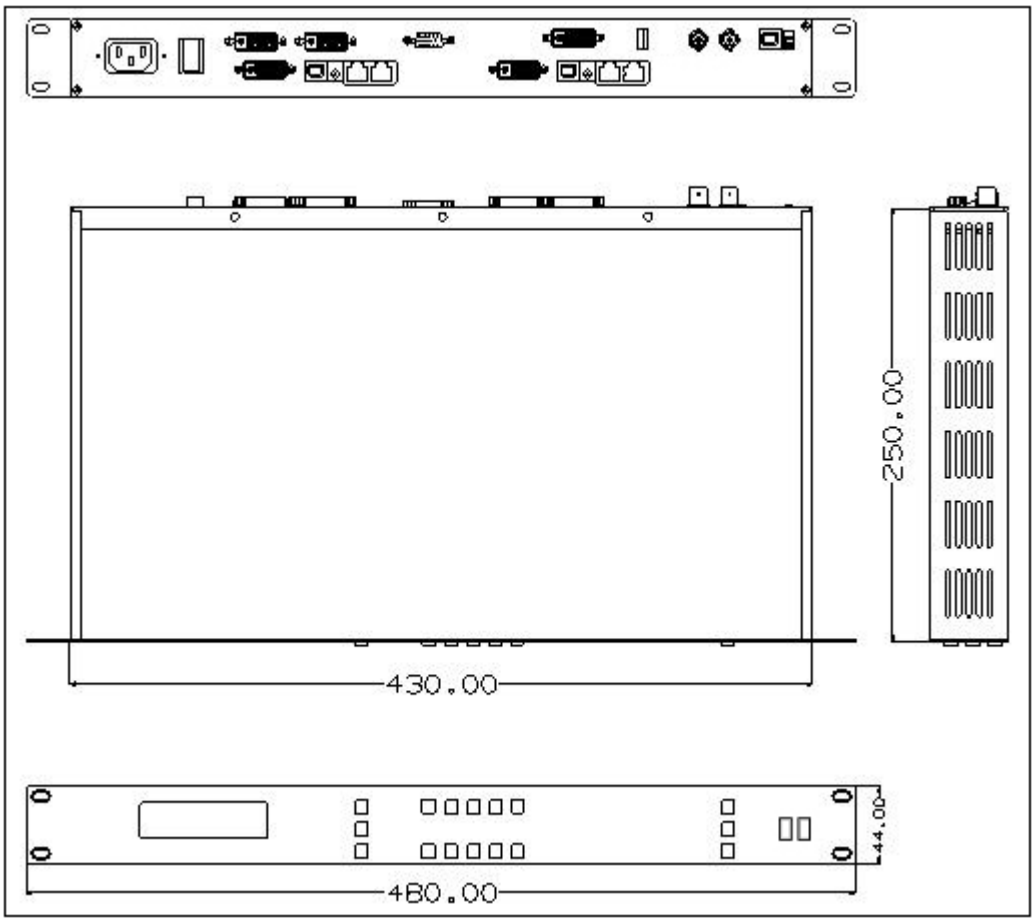
Push to save current config.

3. Hardware Installation

In This Chapter

This chapter provides comprehensive installation instruction for VSP 112W hardware:

Following is the size of VSP 112W for your reference.



Safety Precautions

For all VSP 112W processor installation procedures, please observe the following important safety and handling rules to avoid damage to yourself and the equipment.

- To protect users from electric shock, ensure that the chassis connects to earth via the ground wire provided in the AC power Cord.
- The AC Socket-outlet should be installed near the equipment and be easily accessible.

Unpacking and Inspection

Before opening VSP 112W process shipping box, inspect it for damage. If you find any damage, notify the shipping carrier immediately for all claims adjustments. As you open the box, compare its contents against the packing slip. If you find any shortages, contact your sales representative.

Once you have removed all the components from their packaging and checked that all the listed components are present, visually inspect the system to ensure there was no damage during shipping. If there is damage, notify the shipping carrier immediately for all claims adjustments.

Site Preparation

The environment in which you install your VSP 112W should be clean, properly lit, free from static, and have adequate power, ventilation, and space for all components.

4. Menu Orientation

In This Chapter

This chapter describes all VSP 112W processor menus, including how they are accessed, the functions that are available, and descriptions of each menu tree (in block diagram format).

The following topics are discussed:

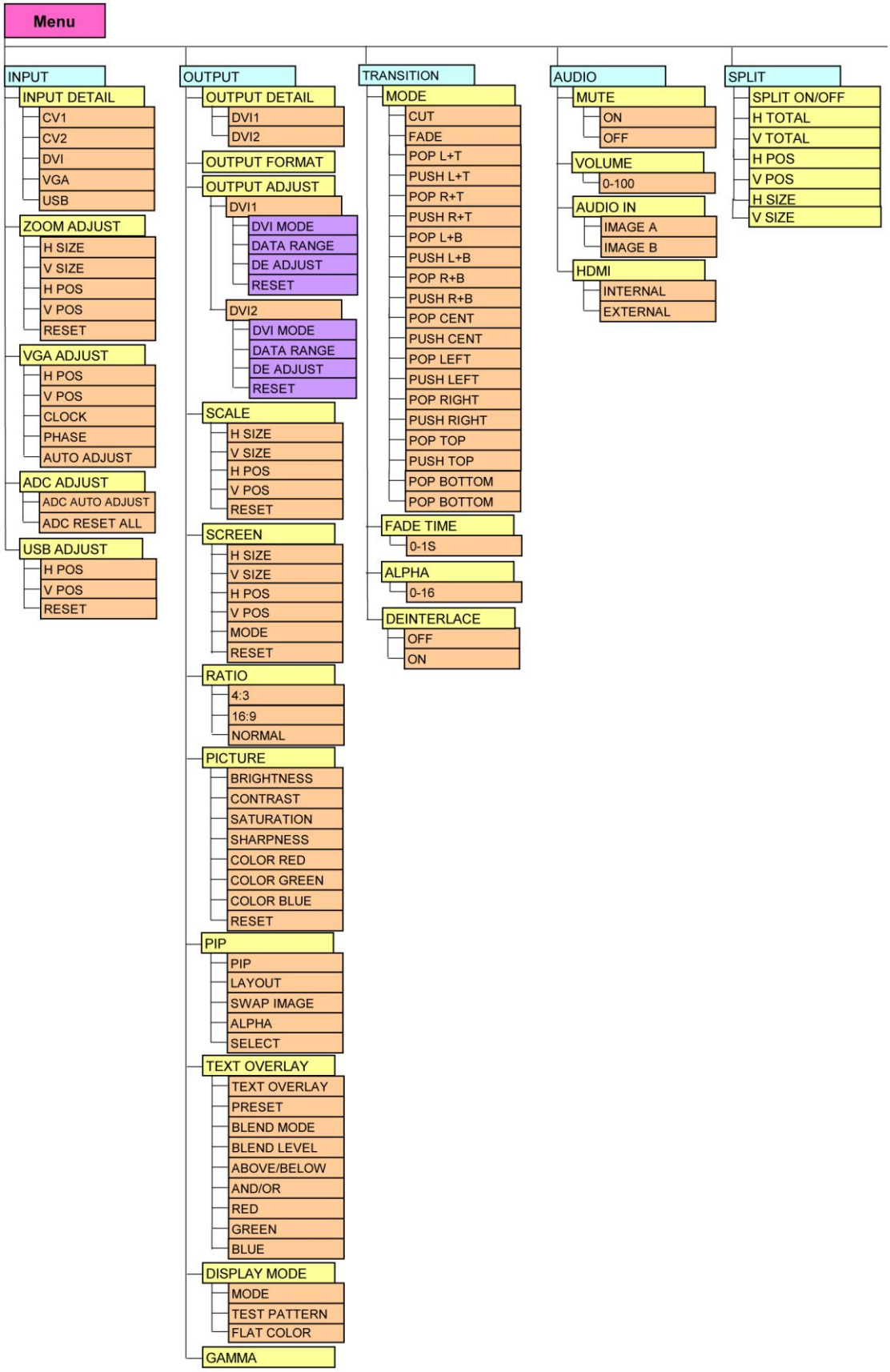
- **MENU**
  - INPUT
  - OUTPUT
  - TRANSITION
  - AUDIO
  - SPLIT
  - SAVE SETUP
  - SYSTEM
  - LANGUAGE
  - FACTORY RESET

MENU

Press the **MENU** to main menu, main menu as shown below. Press knob buttons to select left or right menu item. “*” before the menu means it’s in selected state. Push the knob to enter corresponding setting or view the menu.

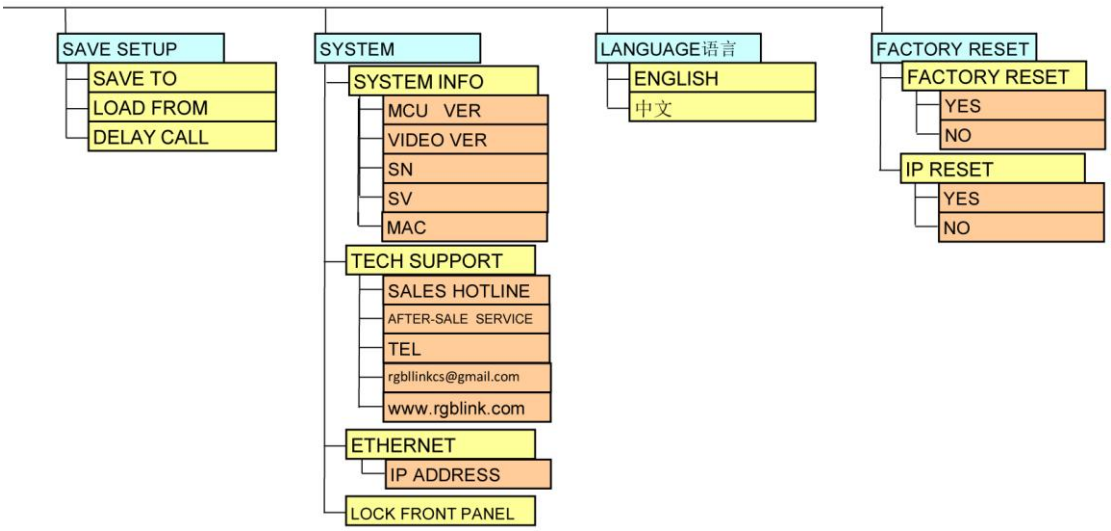
4. Menu Orientation

MENU



4. Menu Orientation

MENU



MENU---INPUT

Select INPUT, press it to confirm, show level 2 menus as follows:

INPUT DETAIL: Display input signal information, including CV1, CV2, DVI, VGA, USB.

ZOOM ADJUST: It can adjust the position and the scale, as following:

H SIZE: Width setting.

V SIZE: Height setting.

H Pos: Horizontal phase setting.

V Pos: Vertical phase setting.

RESET: If quality image distort by mistake in improper operation, it can be initialized operation to recover factory setting.

VGA ADJUST： Mainly aimed at H POS, V POS, CLOCK, PHASE when VGA input. It also can use the AUTO ADJUST to adjust.

ADC AUTO ADJUST：Mainly aim at the BRIGHTNESS to auto adjusting.

USB ADJUST： Mainly aimed at H POS, V POS when USB input. It also can use the AUTO ADJUST to adjust. If quality image distort by mistake in improper operation, it can be initialized operation to recover factory setting.

MENU ---OUTPUT

Select OUTPUT, press it to confirm, show level 2 menus as follows:

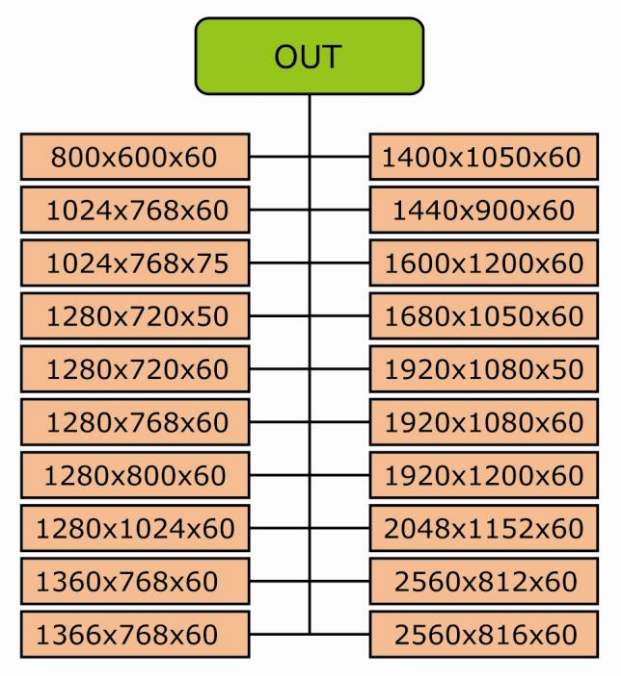
OUTPUT DETAIL: Display output signal information, including DV1, DV2,

4. Menu Orientation

MENU

OUT FORMAT: Mainly display the current output signal and output resolution.

Users can choose different output formats through the UP/DOWN button, this option includes 20 common output resolutions, shown as follow:



Note

The OUT button can also fulfill this setting.

OUTPUT ADJUST: Output adjust menu, the sub-menu as following:

DVI1, setting as following:

DVI MODE: Can select HDMI agreement or DVI; by default is DVI output, When need HDMI signal output, choose HDMI.

DATE RANGE: DVI1 out range adjustment can choose RGB or YCBCR; among them the RGB adjusting range is between 0-255, YCBCR adjusting range from 16 to 235.

DE ADJUST: DE adjust, the sub-menu as following:

DE ON/OFF: Can choose to open or close, when choose open, it can be adjusted to DE, as follows:

H SIZE: Width setting;

4. Menu Orientation

MENU

V SIZE: Height setting;

H Pos: Horizontal phase setting;

V Pos: Vertical phase setting;

When the signal source of the screen appear black side, can use this function adjustment, make the image to full screen display.

RESET: If quality image distorts by mistake in improper operation, it can be initialized operation to recover factory setting.

DVI2: Including DVI MODE, DATA RANGE, DE ADJUST, and RESET, same with DVI1.

SCALE： Scale menu as following:

H SIZE: Width setting.

V SIZE: Height setting.

H Pos: Horizontal phase setting.

V Pos: Vertical phase setting.

RESET: If quality image distorts by mistake in improper operation, it can be initialized operation to recover factory setting.

Note

The SCALE button can also fulfill this setting.

SCREEN： Screen setting, user can change the screen through the digital setting parameters to easily change the screen size and position. Mainly used in the LED large screen users. Settings as follow:

H SIZE: Width setting;

V SIZE: Height setting;

H Pos: Horizontal phase setting;

V Pos: Vertical phase setting;

Mode: window mode, can scale the（Screen）and（Full）switch.

Note

The FS button can also fulfill this setting.

4. Menu Orientation

MENU

RESET: If quality image distorts by mistake in improper operation, it can be initialized operation to recover factory setting.

RATIO: Proportional setting, press it, can realize the conversion between high and wide.

Normal: Original video proportion, 4:3 aspect ratios; 16:9 aspect ratios;

PICTURE: Picture setting, the sub-menu as following:

BRIGHTNESS: It can change the image color BRIGHTNESS via BRIGHTNESS Settings.

CONTRAST: It can change the image color CONTRAST via CONTRAST settings.

SATURATION: It can change the image color SATURATION via SATURATION Settings.

SHARPNESS: It can change the image color SHARPNESS via SHARPNESS Settings.

COLOR RED: It can change the image color Red via Red Settings.

COLOR GREEN: It can change the image color Green via Green Settings.

COLOR BLUE: It can change the image color Blue via Blue Settings.

RESET: If quality image distorts by mistake in improper operation, it can be initialized operation to recover factory setting.

Users can set according to their actual situation, this function mainly suitable for these very professional for image quality. Non-professionals are not suggesting above operations. If quality image distorted by mistake in improper operation, it can be initialized operation to recover factory setting.

The numerical range that needs adjusting is between 0-100. Press MENU to exit and return to higher level MENU.

PIP: PIP setting, press PIP and choose ON to set PIP mode.

LAYOUT: Can choose PIP layout, the corresponding results are as follows:

4. Menu Orientation

MENU

PIP L+T PBP L+R PBP T+B

SWAP IMAGE: It can set PIP to swap exchange, when choose ON, it can realize the main and sub-picture exchange.

ALPHA: Can set the image display transparency, regulating range between 0 - 16.

SELECT: Can choose to set the size or position of IMAGE A or IMAGE B individually.

TEXT OVERLAY: Text overlay function, settings as follows:

TEXT OVERLAY: Can select “ON” or “OFF”, OFF is the default state.

PRESET: Can preset value of the following functions, and total 13 modes:

User: User mode.

WhOnBk1: White On Black 1.

WhOnBk2: White On Black 2.

BkOnWh1: Black On White 1.

BkOnWh2: Black On White 2.

GrnOnBk1: Green On Black 1.

GrnOnBk2: Green On Black 2.

GrnOnWh1: Green On White 1.

GrnOnWh2: Green On White 2.

RedOnBk1: Red On Black 1.

RedOnBk2: Red On Black 2.

RedOnWh1: Red On White 1.

RedOnWh2: Red On White 2.

4. Menu Orientation

MENU

BLEND MODE: Blend mode, with two modes, “Mode 1” and “ Mode 2”.

Mode 1: Graphic content locate at the top and is non-transparent, background transparency is controlled by double-picture transparency;

Mode 2: Graphic content is controlled by double-picture transparency, the background is completely transparent;

BLEND LEVEL: Can set the image display transparency, regulating range between 0 - 16.

ABOVE/BELOW:

ABOVE: In image 2, if the pixel value is higher than the setting value, then the image is the graphic content pixel, otherwise, it is the graphic background pixel. It should combined with "AND/OR" conditions when judging.

BELOW: In image 2, if the pixel value is lower than the setting value, then the image is the graphic content pixel, otherwise, it is the graphic background pixel. It should combined with "AND/OR" conditions when judging.

AND/OR:

AND: All “Red, Green, Blue” value must meet ABOVE or BELOW conditions.

OR: Any one of “Red, Green, Blue” value should meet ABOVE or BELOW conditions.

RED: Red limit, cut-off point condition of ABOVE and BELOW condition in red channel, the range is 0 ~ 255.

GREEN: Green limit, cut-off point condition of ABOVE and BELOW condition in green channel, the range is 0 ~ 255.

BLUE: Blue limit, cut-off point condition of ABOVE and BELOW condition in blue channel, the range is 0 ~ 255.

DISPLAY MODE:

MODE: Image mode selection, user can choose different output modes

according to their requirement, such as: black, video image, freeze image, pure color image, test pattern.

TEST PATTERN: Test pattern setting, press UP/DOWN button, there are 1-66 kinds of modes for choose.

FLAT COLOR: When the output mode is pure color image, choose corresponding red, green and blue color value in this option to meet the practical needs.

GAMMA: Gamma setting, press it to adjust the image gamma value; Gamma values include: -1.2, -1.4, -1.6, 1, 1.2, 1.4, 1.6, sRGB;

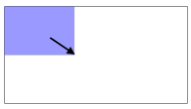
MENU --- TRANSITION

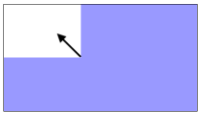
Choose the TRANSITION, press SEL to confirm, then the LCD screen displays the level 2 menu as following:

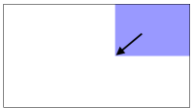
MODE: Switch mode, including the following modes:

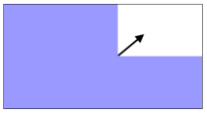
CUT: Seamless switching.

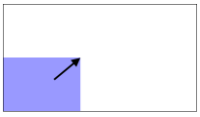
FADE: Fade in fade out.

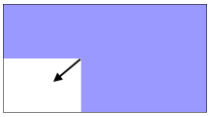
POP L+T: Upper left corner pop up 

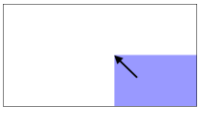
PUSH L+T: Upper left corner push 

POP R+T: Upper right corner pop up 

PUSH R+T: Upper right corner push 

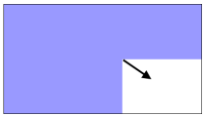
POP L+B: Lower left corner pop up 

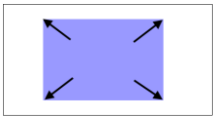
PUSH L+B: Lower left corner push 

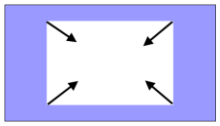
POP R+B: Lower right corner pop up 

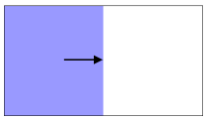
4. Menu Orientation

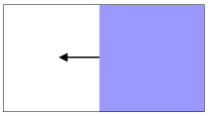
MENU

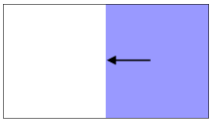
PUSH R+B: Lower right corner push 

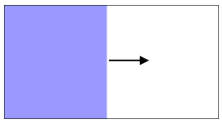
POP CENTRE: Centre pop up 

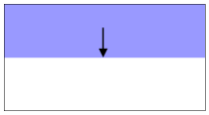
PUSH CENTRE: Centre push 

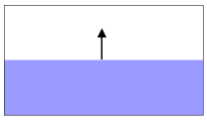
POP LEFT: Left pop up 

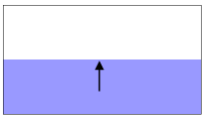
PUSH LEFT: Left push 

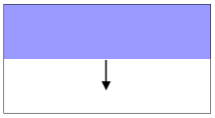
POP RIGHT: Right pop up 

PUSH RIGHT: Right push 

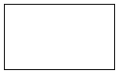
POP TOP: Top pop up 

PUSH TOP: Top push 

POP BOTTOM: Bottom pop up 

PUSH BOTTOM: Bottom push 

Note: On behalf of the image emerging;

 On behalf of the image disappearing;

Arrows represents the direction of the image move, that is, the image that arrow point, is compressed or stretched to the direction that arrow indicates, until disappear or full screen.

4. Menu Orientation

MENU

FADE TIME: Switch time setting. Press UP/DOWN button to choose the time and press SEL to confirm. The switching time ranges from 0 to1.0.

ALPHA: It can set the image transparency, regulating range between 0 - 16.

DEINTERLACE: Force Deinterlace function, can choose “ON” or “OFF”.

ON: Force interlace, no effect switching.

OFF: No deinterlace, with effect switching.

MENU --- AUDIO

MUTE: Mute, can open or close it.

VOLUME: Volume adjustment.

AUDIO IN: Can choose audio input source for IMAGE A main image or IMAGE B sub-image.

HDMI: Can choose HMDI audio as INTERNAL embedded audio or EXTERNAL audio.

MENU --- SPLIT

Choose the SPLIT, press SEL to confirm, then the LCD screen displays the level 2 menu as following:

SPLIT ON/OFF: Split function, can choose “ON” or “OFF”.

H TOTAL: Horizontal total.

V TOTAL: Vertical total.

H SIZE: Width setting.

V SIZE: Height setting.

H POS: Horizontal phase setting.

V POS: Vertical phase setting.

MENU --- SAVE SETUP

SAVE TO: The device provides ten save modes, users can save the current operation to SAVE1, SAVE2, SAVE3;

Note

The SAVE button can also fulfill this setting.

4. Menu Orientation

MENU

LOAD FROM: It can call the saved user modes via the call save function.

DELAY CALL: Set delay the output time. When more than one equipment power on, and the processor is the end equipment in order to improve question that can't identify the input signal and phenomenon that LED screen appear messy code and flash screen, now need to delay the input time.

MENU --- SYSTEM

SYSTEM INFO: System information.

MCU VER: Information of MCU version.

VIDEO VER: Information of VIDEO version.

SN: It is the Factory serial number of VSP 112W which is used to search the information of VSP 112W.

SV: Information of software version.

MAC: MAC address.

TECH SUPPORT:

SALES HOTLINE.

AFTER-SALE SERVICE.

TEL: Phone of technology support.

WEB SITE: Company web site of technology support.

EMAIL: Email of technology support.

ETHERNET: Network setting, including:

IP ADDRESS: 192.168.000.100.

LOCK FRONT PANEL: Through this setting can choose whether to lock the keys, if the key is locked, the equipment will remind: "please click MUNE and SEL key to release button!" User can also press the two keys to unlock equipment.

MENU --- LANGUAGE

Through this option, user can choose Chinese or English according to their needs to operate the interface more quickly.

4. Menu Orientation

MENU

MENU --- FACTORY RESET

Enter FACTORY RESET or IP reset; choose YES and press the SEL button to confirm; then VSP 112W is reset to its factory settings. After 5 seconds, it completes factory settings and is ready for more operations.

5. Communication Software Guideline

In This Chapter

This chapter provides detailed information about the control communication software. The following topics are discussed:

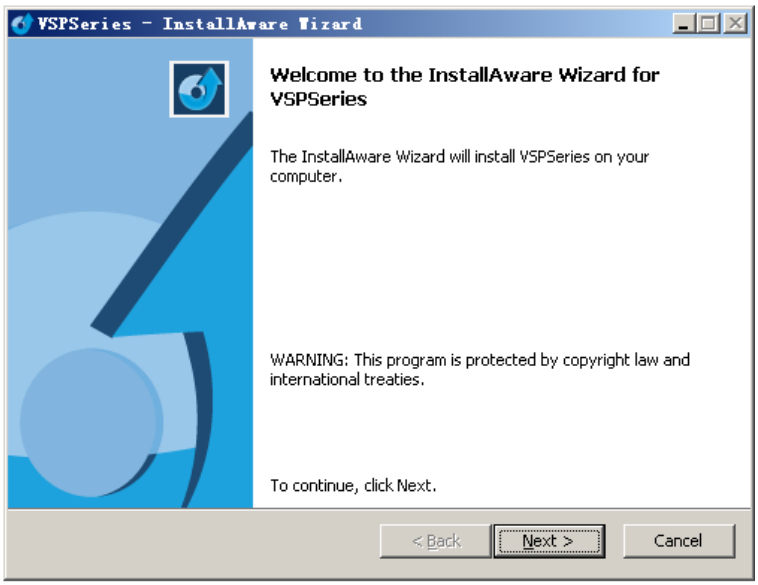
- Software Installation
- Software Operation
- How to Connect PC Through LAN Interface

Software Installation

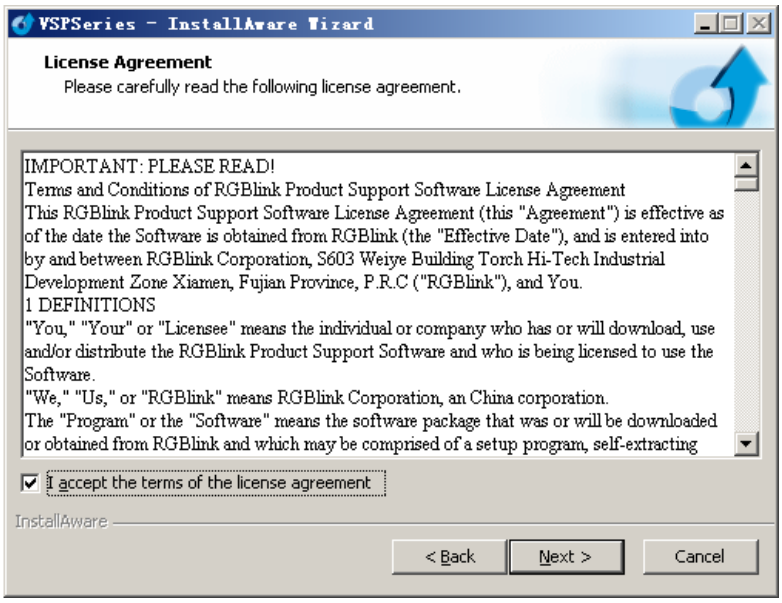
AVDSP video processor is very easy to be configured with user friendly communication software, support drag and drop operation for edit and display. Also it can be customized with schedule function.

Double click

to install, English version default for use, click “select” to next dialog:

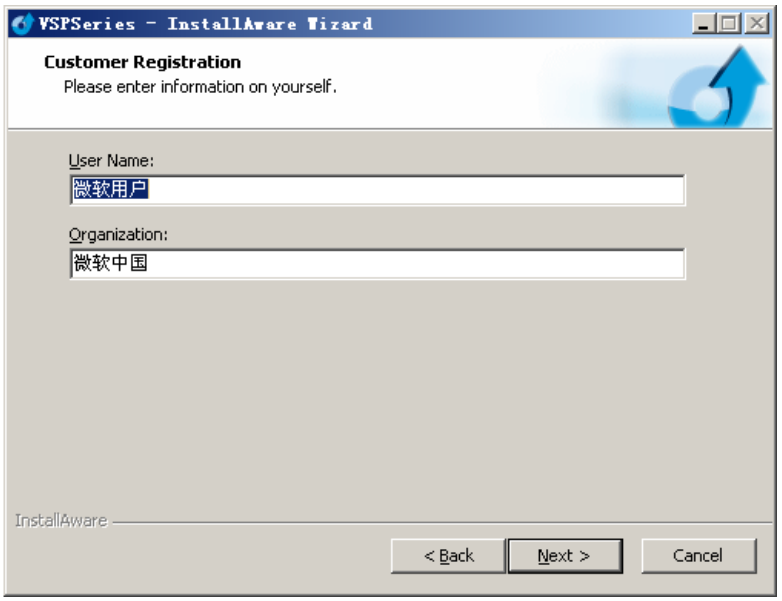

VSPSeries - InstallAware Wizard
Welcome to the InstallAware Wizard for VSPSeries
The InstallAware Wizard will install VSPSeries on your computer.
WARNING: This program is protected by copyright law and international treaties.
To continue, click Next.
< Back
Next >
Cancel

And in next dialog is the user agreement of the software, click Agree to go on:

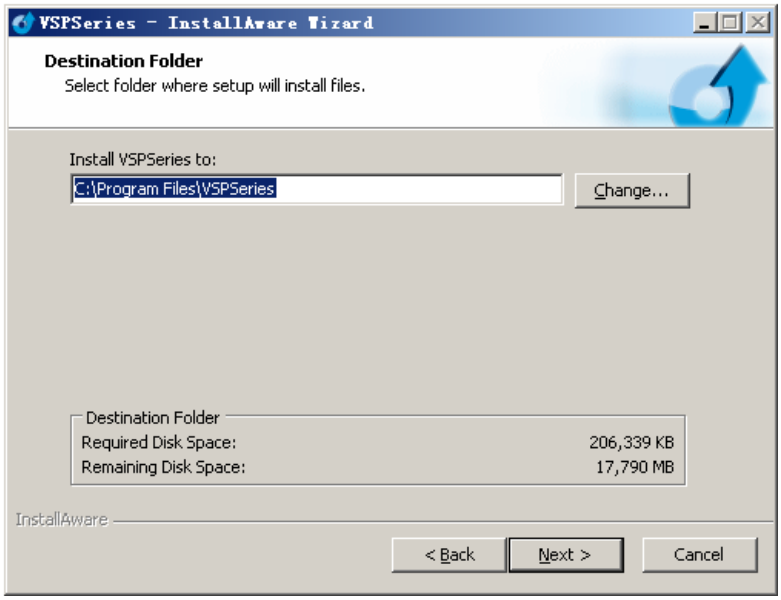

VSPSeries - InstallAware Wizard
License Agreement
Please carefully read the following license agreement.
IMPORTANT: PLEASE READ!
Terms and Conditions of RGBlink Product Support Software License Agreement
This RGBlink Product Support Software License Agreement (this "Agreement") is effective as of the date the Software is obtained from RGBlink (the "Effective Date"), and is entered into by and between RGBlink Corporation, S603 Weiye Building Torch Hi-Tech Industrial Development Zone Xiamen, Fujian Province, P.R.C ("RGBlink"), and You.
1 DEFINITIONS
"You," "Your" or "Licensee" means the individual or company who has or will download, use and/or distribute the RGBlink Product Support Software and who is being licensed to use the Software.
"We," "Us," or "RGBlink" means RGBlink Corporation, an China corporation.
The "Program" or the "Software" means the software package that was or will be downloaded or obtained from RGBlink and which may be comprised of a setup program, self-extracting
I accept the terms of the license agreement
InstallAware
< Back
Next >
Cancel

5. Communication Software Guideline

Software Installation



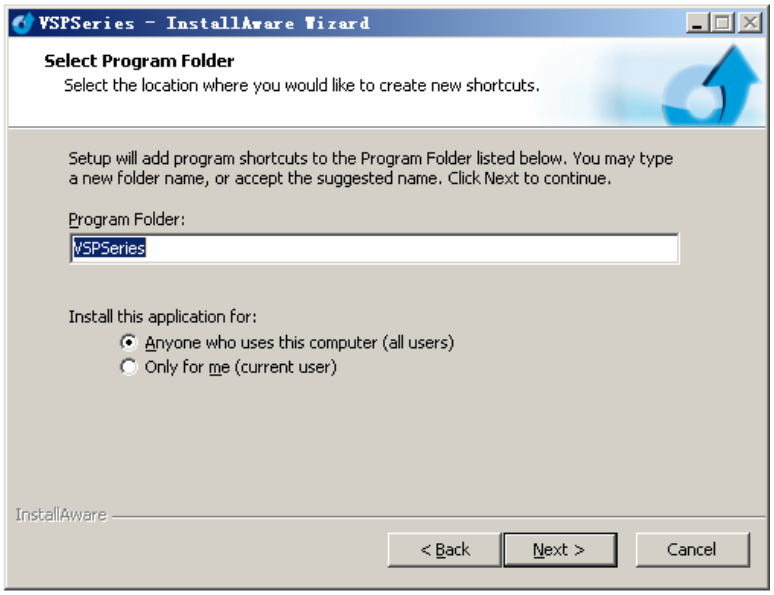
User can select “Change” to choose the VSP 112W install software:



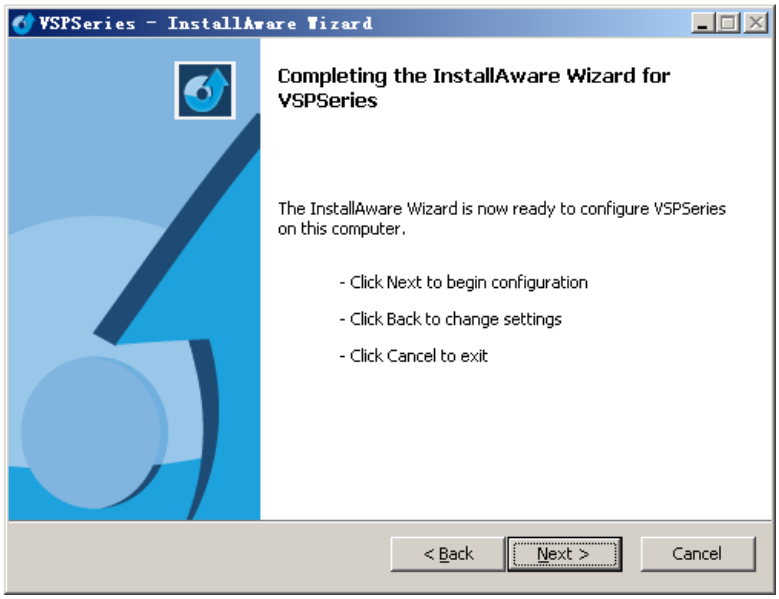
5. Communication Software Guideline

Software Installation

Click “Next” to go on:


VSPSeries - InstallAware Wizard
Select Program Folder
Select the location where you would like to create new shortcuts.
Setup will add program shortcuts to the Program Folder listed below. You may type a new folder name, or accept the suggested name. Click Next to continue.
Program Folder:
VSPSeries
Install this application for:
Anyone who uses this computer (all users)
Only for me (current user)
InstallAware
< Back
Next >
Cancel

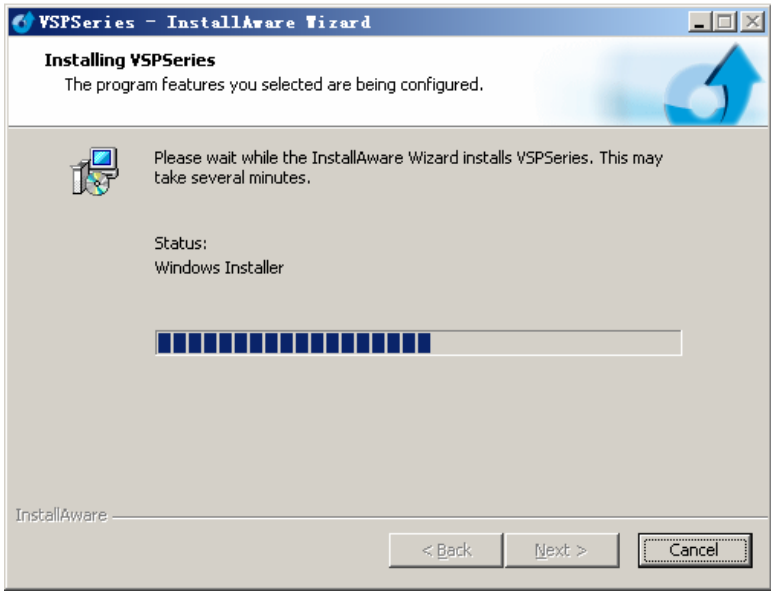
Click “Next” to go on:


VSPSeries - InstallAware Wizard
Completing the InstallAware Wizard for VSPSeries
The InstallAware Wizard is now ready to configure VSPSeries on this computer.
- Click Next to begin configuration
- Click Back to change settings
- Click Cancel to exit
< Back
Next >
Cancel

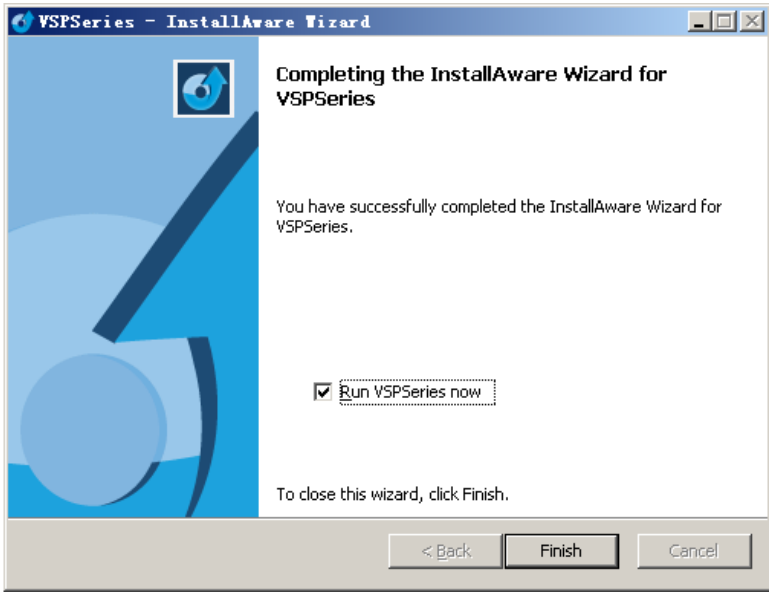
5. Communication Software Guideline

Software Installation

Click “Next” to go on:


VSPSeries - InstallAware Wizard
Installing VSPSeries
The program features you selected are being configured.
Please wait while the InstallAware Wizard installs VSPSeries. This may take several minutes.
Status:
Windows Installer
InstallAware
< Back
Next >
Cancel

Click “Finish” and ready to run VSP 112W console:


VSPSeries - InstallAware Wizard
Completing the InstallAware Wizard for VSPSeries
You have successfully completed the InstallAware Wizard for VSPSeries.
Run VSPSeries now
To close this wizard, click Finish.
< Back
Finish
Cancel

Software Operation

Install communication which comes with the package of VSP 112W device.

Double click

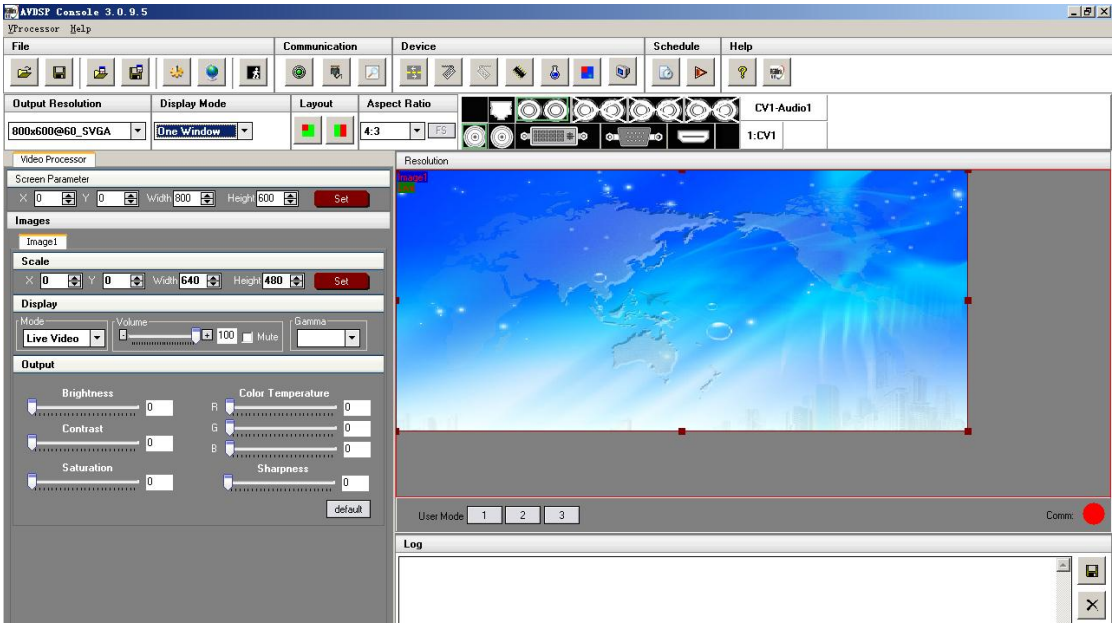
icon from home screen to run the software.

Double click

icon, then choose and click

to run the software.

VSP 112W communication software interface as shown：



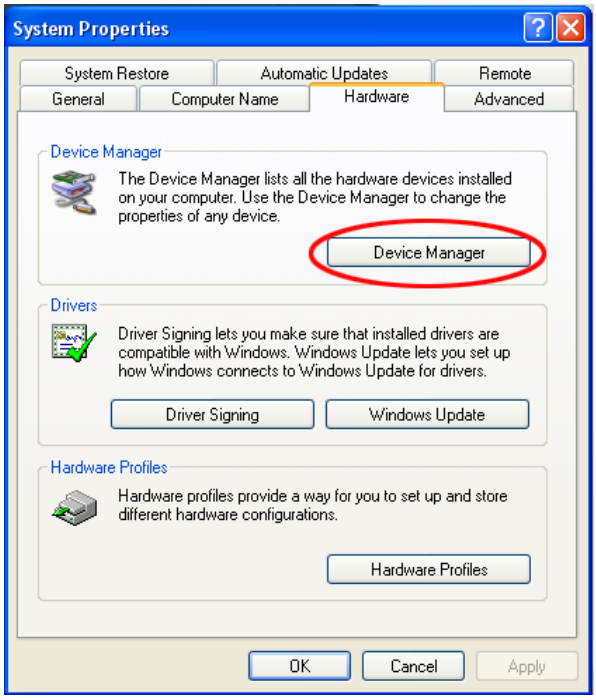
Connection

When control video processor through PC software, besides the power cord, the product default equip with a line that is COM (RS-232), 9-pin (DB9F), RJ11 COM crystal head (6 B4C). Below are the details about connection of steps:

First connect 9-pin (DB9F) to the computer on the corresponding port, and connect COM crystal to RS232 port on video processor. Open video processor; Next, operate the computer, back to computer desktop, right click [My computer] to [Properties], find the [Hardware] option card, as follows, left click [Device manager]:

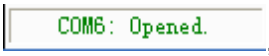
5. Communication Software Guideline

Software Operation

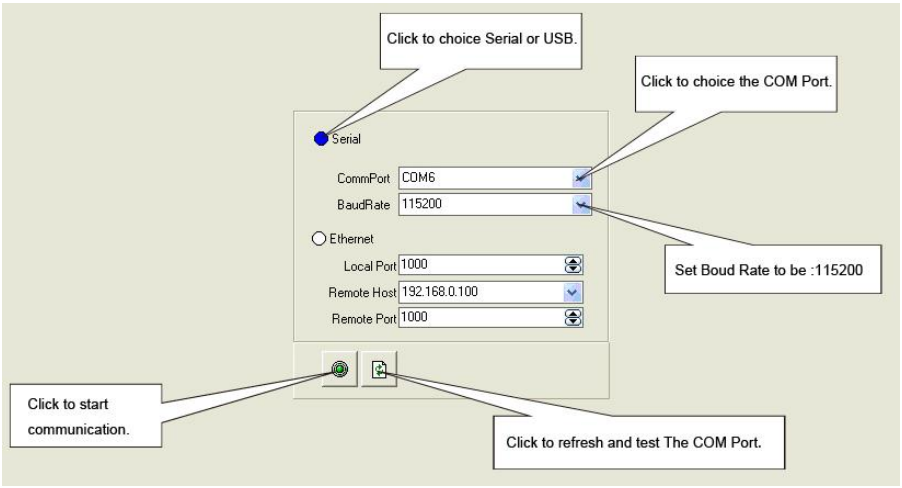

System Properties
System Restore
Automatic Updates
Remote
General
Computer Name
Hardware
Advanced
Device Manager
The Device Manager lists all the hardware devices installed on your computer. Use the Device Manager to change the properties of any device.
Device Manager
Drivers
Driver Signing lets you make sure that installed drivers are compatible with Windows. Windows Update lets you set up how Windows connects to Windows Update for drivers.
Driver Signing
Windows Update
Hardware Profiles
Hardware profiles provide a way for you to set up and store different hardware configurations.
Hardware Profiles
OK
Cancel
Apply

Find [COM and LPT] port in [device manager], click the plus sign on the left, record serial interface name that computer provides, as following chart, the serial port is COM1.

Confirm used COM and open control software, click **[communication]** page, enter setup option, Serial is the default COM, click icon to refresh COM number，choose available COM，default Baud rate is115200. After serial setting, click icon, the icon becomes when

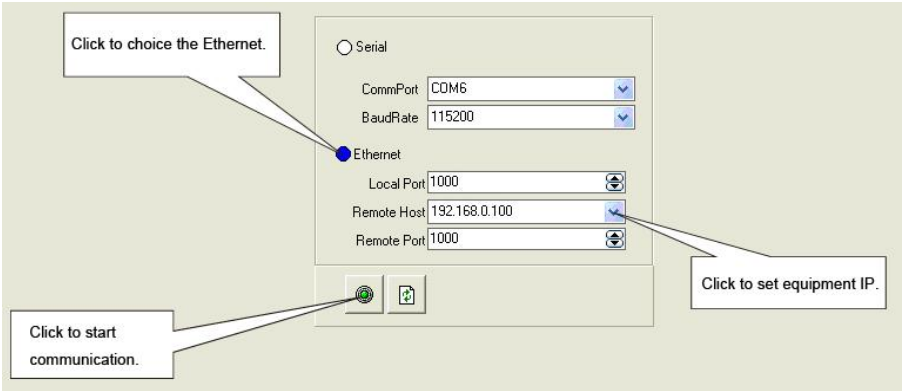
successfully connected，on the left button showing 

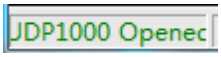
, meaning has connected video processor through COM, and can control video processor through the PC software.



Note

It is unavailable for VSP 112W V1.5 currently.



Ethernet ，user can fill any number less than 1023 in local port，the remote port must be 192.168.0.100 and the remote port must be 1000. After setting above, click the icon to connect with the net work. If successful connect, the icon becomes , status on the left button showing 

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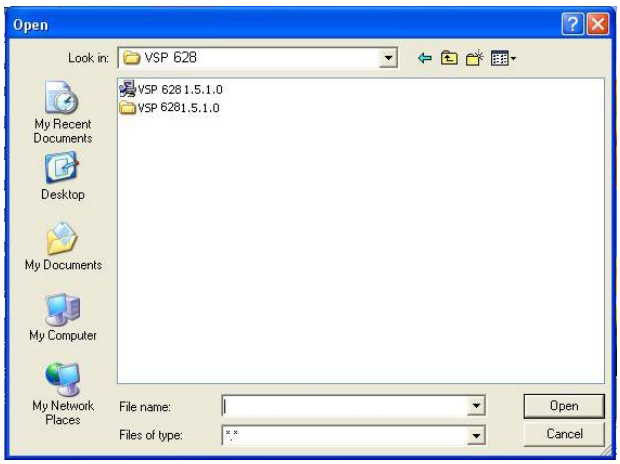
5. Communication Software Guideline

Software Operation

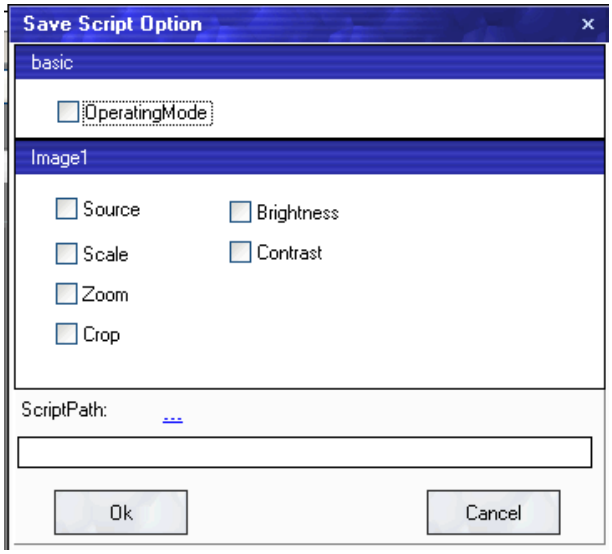
Use

File Toolbar

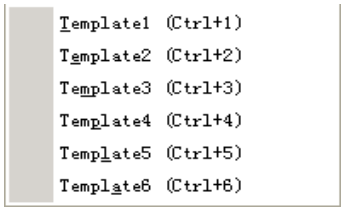
：Open script. User can open saved script and alter its parameters.



：Save script. Save current user parameters as script to the prescribed path.



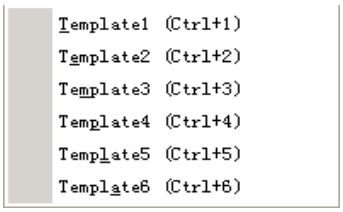
：Import template. There are six templates for user. Users can setup one of templates as the common one.



5. Communication Software Guideline

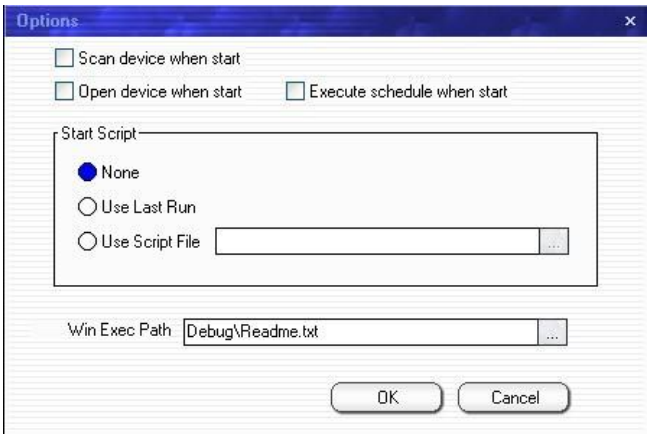
Software Operation

: Export template. Export current config as template.

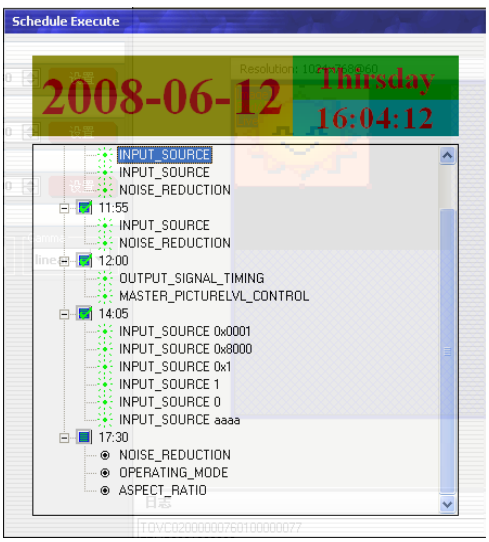


: Option: User can choose open device when start and using script saved before or execute schedule edited before when start.

If user choose open device when start, user can use last run, use script file or none when user start. User can click to choose which script user want to open.



If user choose execute schedule when start, the next dialogue will display when software run.



5. Communication Software Guideline

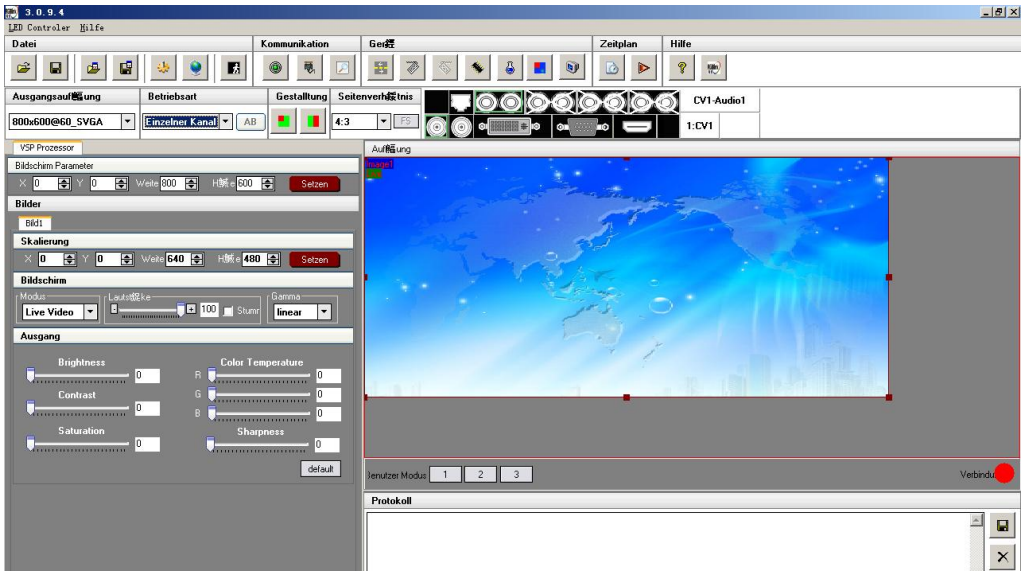
Software Operation

Note

It is unavailable for VSP 112W V1.5 currently.

: Language: The software supports Chinese, English and German version.

The picture following is the German dialogue.



: Exit

Communication Toolbar

: Open COM.

: Close COM

: Set COM.

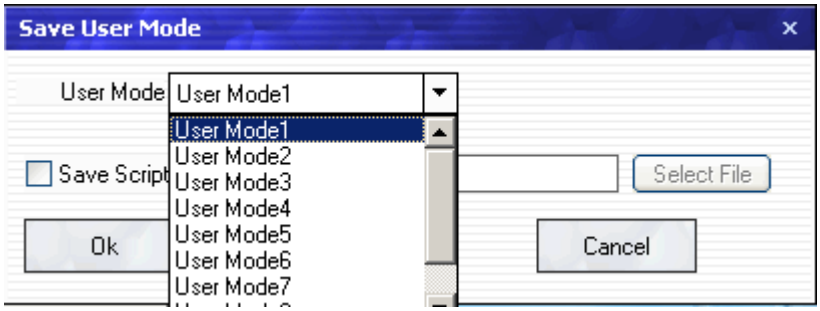
5. Communication Software Guideline

Software Operation

Device Toolbar

: Synchronization.

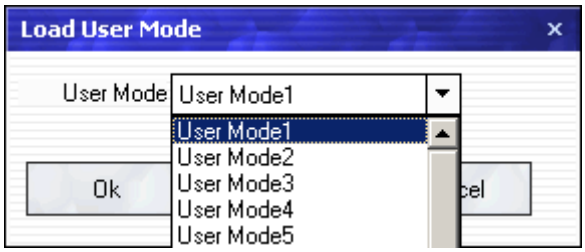
: Save to flash.



Note

Same as MENU → SAVE SETUP → SAVE TO or the same as the SAVE key.

: Load form Flash.



Note

Same as MENU→ SAVE SETUP → LOAD FROM.

: Factory setup；

: Advance

5. Communication Software Guideline

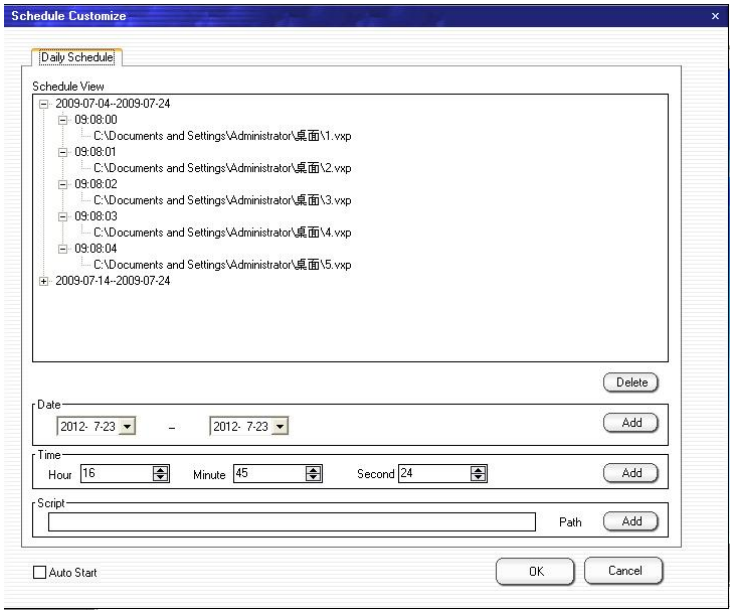
Software Operation

Note

Advance is only done by engineer. Please connect us for password.

Schedule Toolbar

：Customize schedule



：Execute schedule. Execute tasks according to schedule.

5. Communication Software Guideline

Software Operation

Help Toolbar

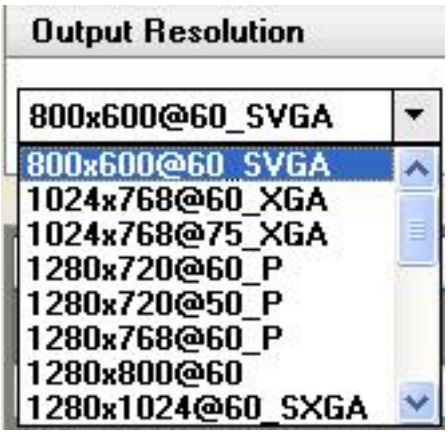
: Help: Display helps dialogue;

: About: Display information of software;

Output Resolution Toolbar

User can choose different output resolution by selecting from pull down list.

VSP 112W has 20 output resolutions for users selection.



Note

Same as MENU→ OUTPUT→ FORMAT OUT or OUT key.

Images Display Mode Toolbar

Choose to work in single channel or dual channel.

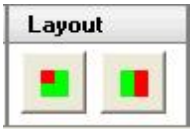
Layout Toolbar

If in single channel mode, the dialog is in grey and it is in limited use.

If in dual channel mode, user can set the device to work in PIP or PBP mode directly with quick preset layout button as following.

5. Communication Software Guideline

Software Operation

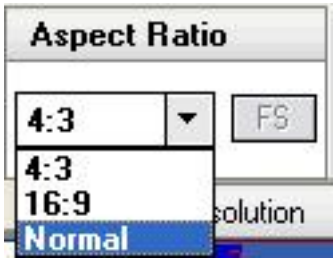


Note

Same as MENU → OUTPUT → PIP → LAYOUT.

Aspect Ratio Toolbar

Users can select 4:3 or 16:9 in the pull-down options.



Note

Same as MENU → OUTPUT → RATIO

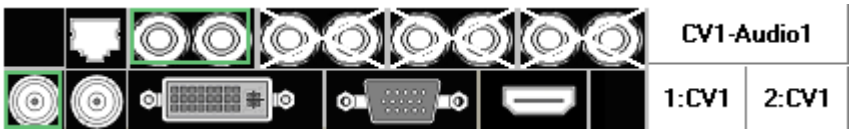
Signal Input Toolbar

The white area displays the name of input interface when the mouse is over the interface picture on the left. The green pane means current selected interface.

When user selects a dual channel mode, select any channel image, click on the toolbar interface the ICONS for the channel selection input interface, i.e.: Composite1, Composite2, DVI, VGA, green toolbar says it has chosen the current interface for channel 1 input interface, the default last single channel chosen interface for channel 2 input interface, the currently selected channel will be shown on the right side of the source.

5. Communication Software Guideline

Software Operation



Screen Parameter Toolbar

User can set size and position of the screen simply, mainly applies to LED screens users. After setting screen parameter， the user choice PIP or PBP operation, display picture can directly shows on corresponding screen.

Note

Same as MENU → OUTPUT → SCREEN

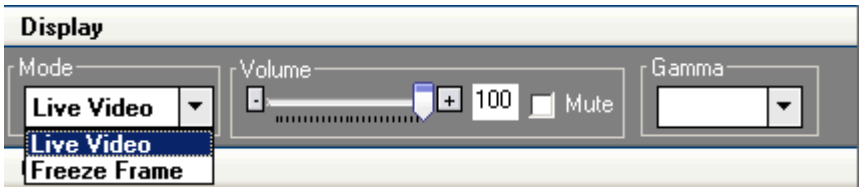
Image Toolbar

User can scale the images；Image 2 can’t choose in single channel mode.

Note

Same as MENU → OUTPUT → SCALE , or SCALE key.

Display Toolbar



When it is in Live Video, the video plays properly; when it is in Freeze Frame, the video stop playing.

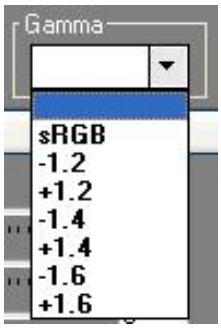
Note

Same as MENU → OUTPUT → DISPLAY MODE → MODE.

5. Communication Software Guideline

Software Operation

Setting Gamma is generally not recommended, since LED large screen itself has Gamma function. For further information, users can contact with our customer service team.

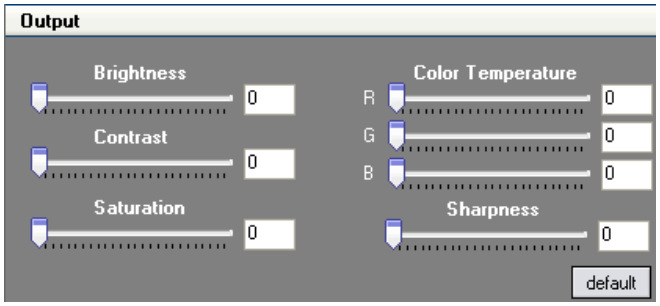


Note

Same as MENU → OUTPUT → GAMMA

Output Image Setup Toolbar

User can customize the brightness and the contrast.



Note

Same as MENU → OUTPUT → PICTURE.

Images Display Toolbar

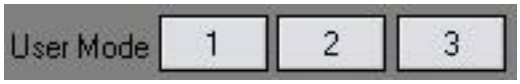
User can customize image or images position and size just by drag and drop image (images) in this area. This process is sync to the parameters in images toolbars.

5. Communication Software Guideline

Software Operation

User Mode Toolbar

Users can recall the saved user mode1, mode2 or mode3

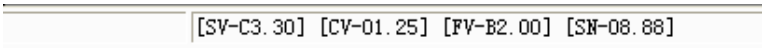


Log Toolbar

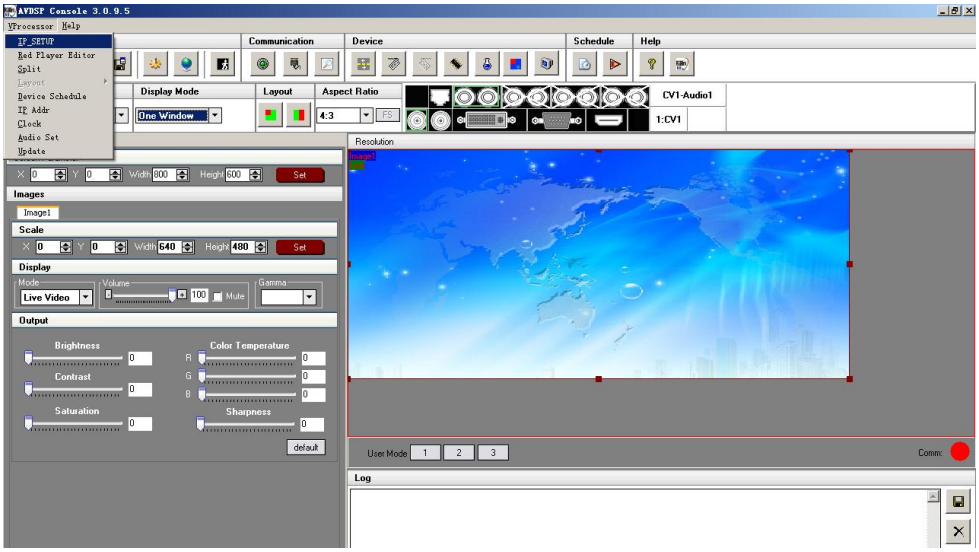
User can save or delete the operate log file.

Information Toolbar

It is the VSP 112W software version, core board version, firmware version and the serial number in bottom of the software interface.



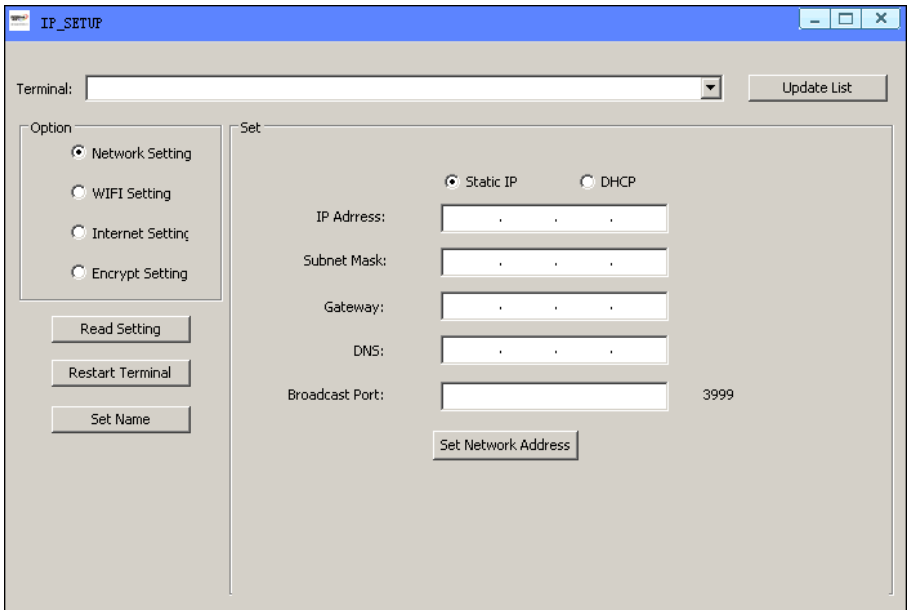
[Video Processor] Options



5. Communication Software Guideline

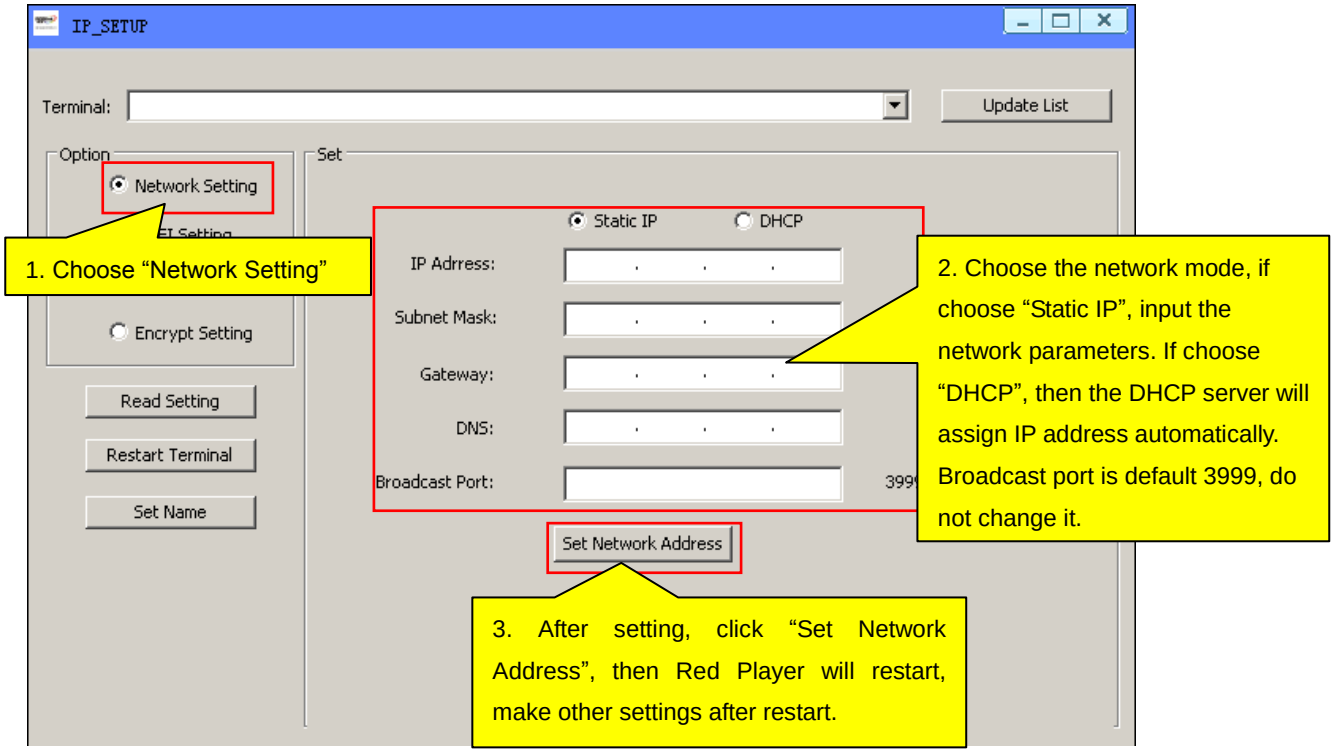
Software Operation

IP SETUP: shown as follows:



Specific operation is as follows:

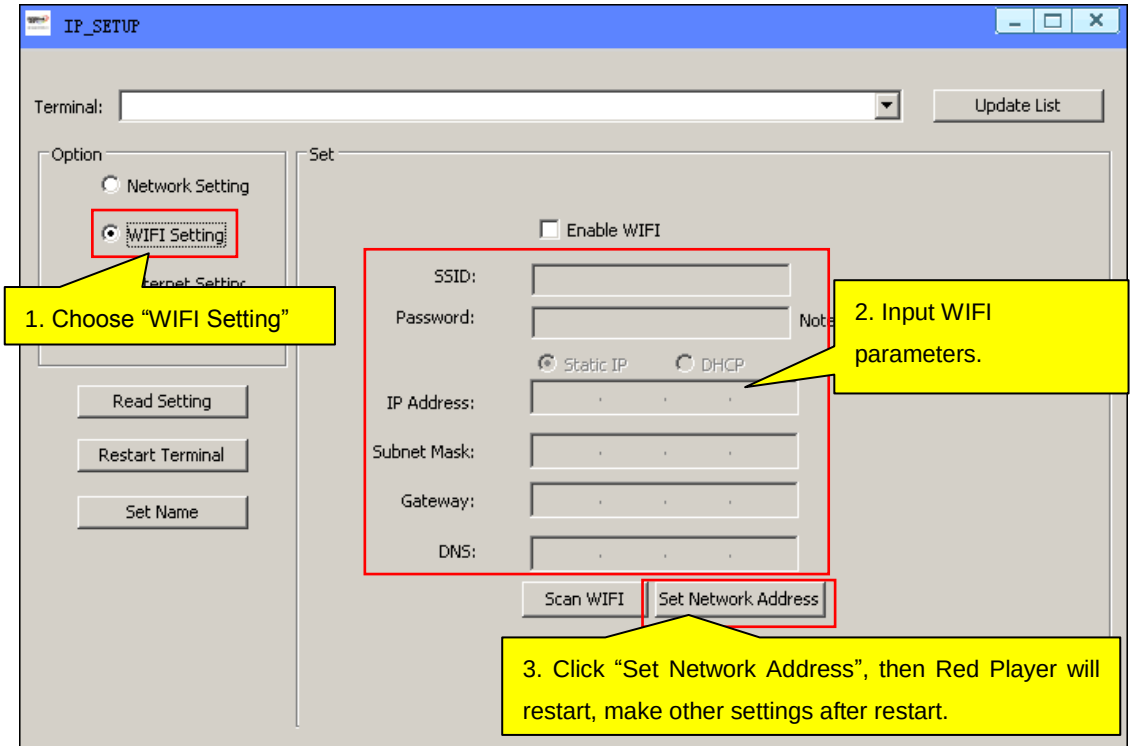
Network Setting:


IP_SETUP
Terminal:
Update List
Option
Network Setting
Encrypt Setting
Read Setting
Restart Terminal
Set Name
Set
Static IP
DHCP
IP Adrress:
Subnet Mask:
Gateway:
DNS:
Broadcast Port:
Set Network Address
1. Choose “Network Setting”
2. Choose the network mode, if choose “Static IP”, input the network parameters. If choose “DHCP”, then the DHCP server will assign IP address automatically. Broadcast port is default 3999, do not change it.
3. After setting, click “Set Network Address”, then Red Player will restart, make other settings after restart.

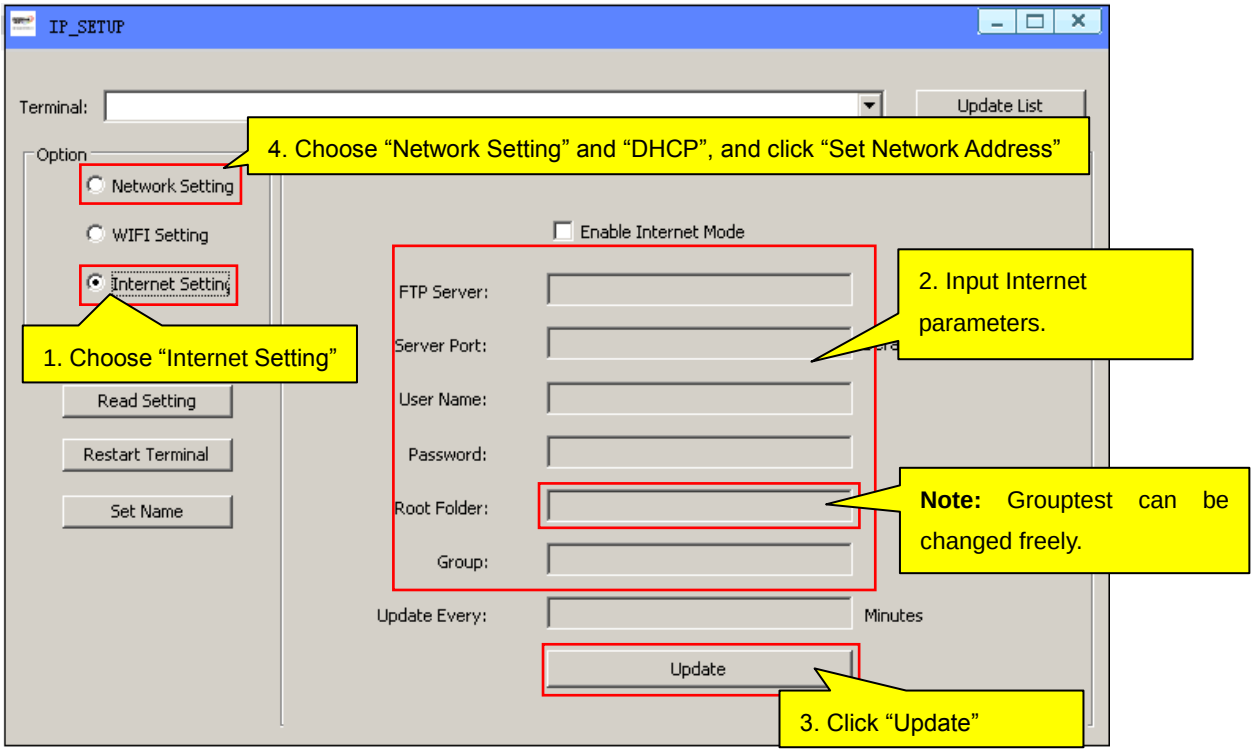
5. Communication Software Guideline

Software Operation

WIFI Setting:



Internet Setting:

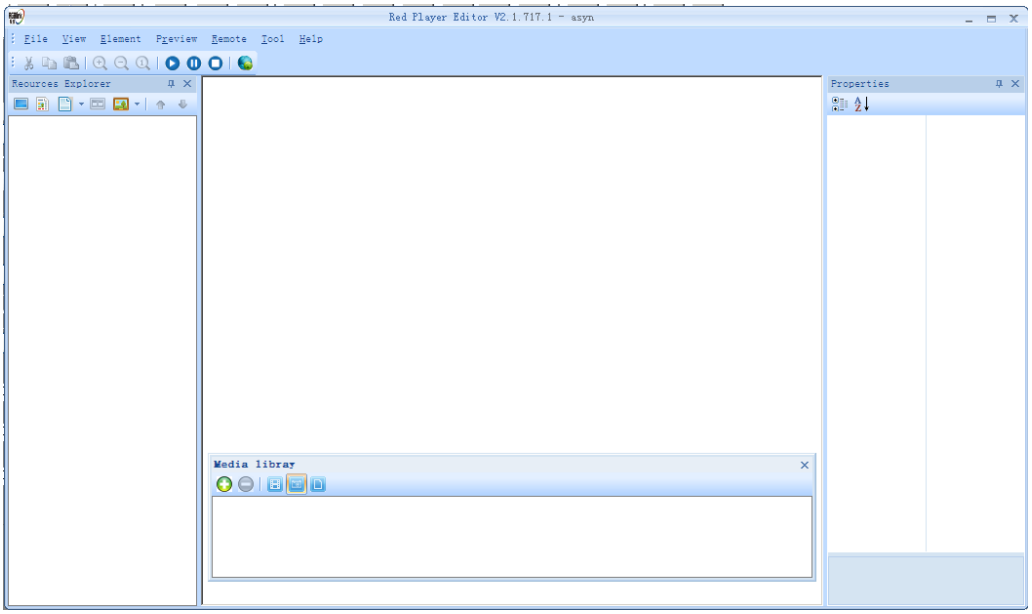


After setting, user can read setting, restart terminal, and set name.

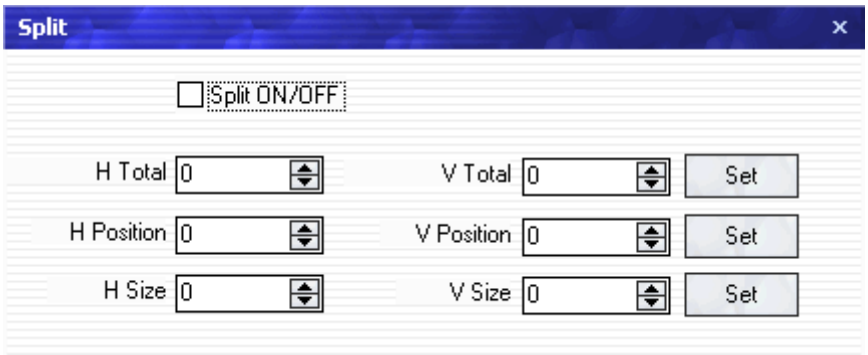
Red Player Editor: Can edit the program, click it and shows as follows, for details, please refer to: How to edit the Program.

5. Communication Software Guideline

Software Operation



Split:



Split function, choose “ON” can set H total, V total, H position, V position, H size and V size.

Note

Same as MENU ⟶ SPLIT.

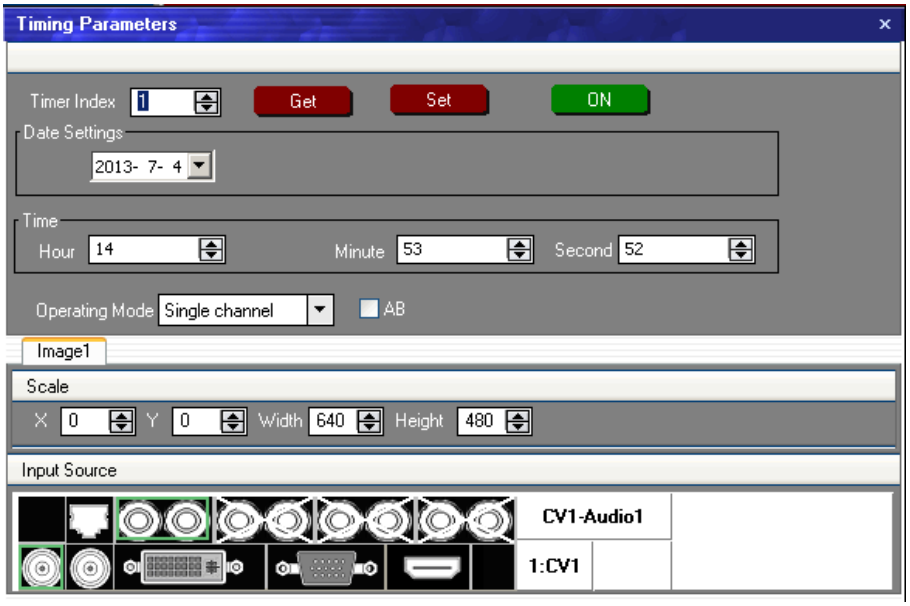
Device Schedule:

Users can set up VSP 112W to play the appointed input video automatically in time and operation of single or dual channels, ratio place.

Users can setup up to 10 timing operation in the schedule.

5. Communication Software Guideline

Software Operation

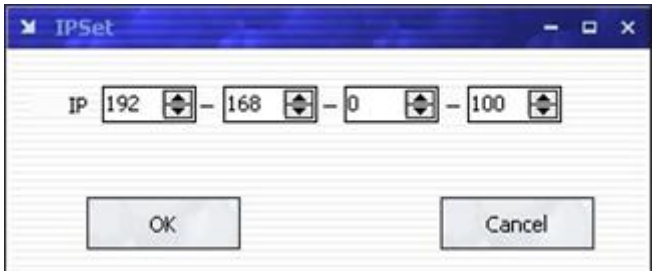


Note

It is unavailable for VSP 112W V1.5 currently.

IP Address：

Users can set equipment IP, usually used under the condition of one computer control or remote control several computers. It takes effect immediately after users change IP through serial port; and when users change IP through network, it takes effect after reopen the software.



Note

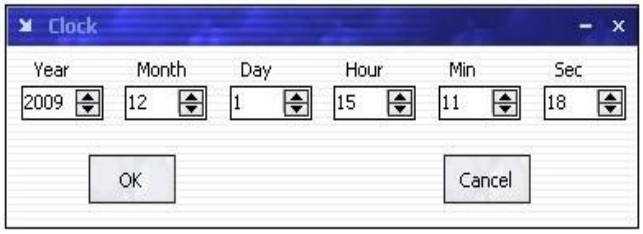
It is unavailable for VSP 112W V1.5 currently.

Clock：

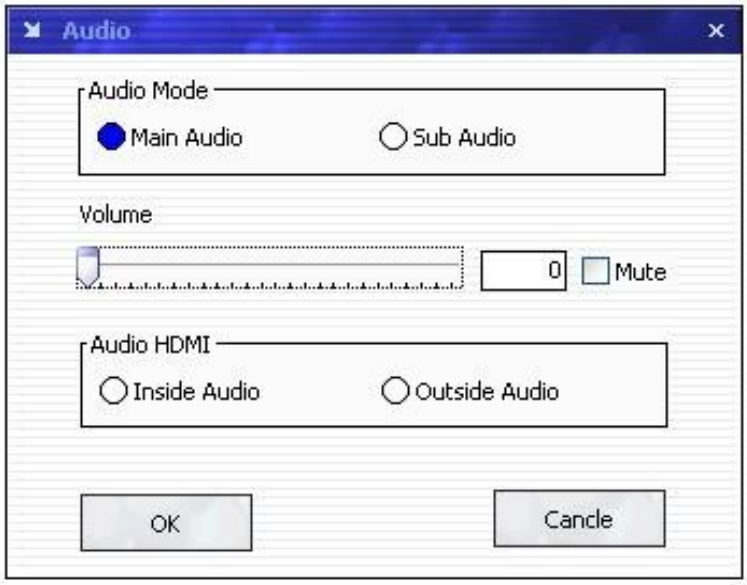
Users can set or adjust lower computer time through” clock”

5. Communication Software Guideline

Software Operation



Audio setting：



[Help] Options

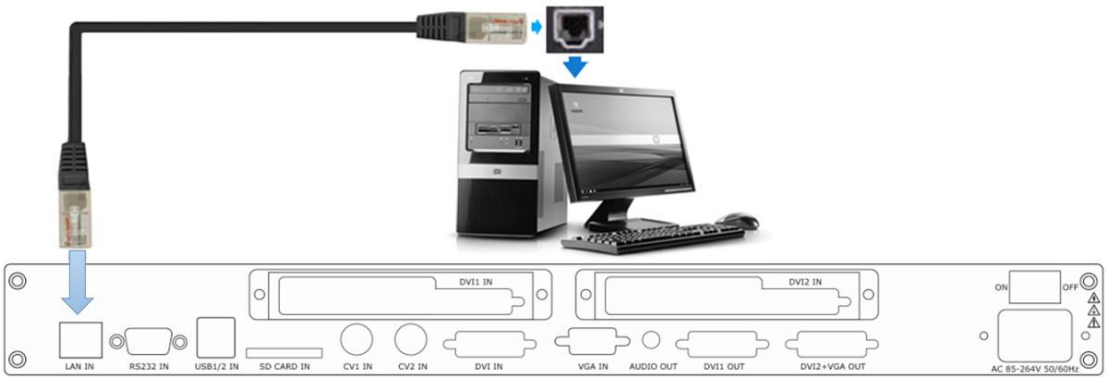
Version: The update of software

About: The information of the software version and the company.

How to Connect PC Through LAN Interface

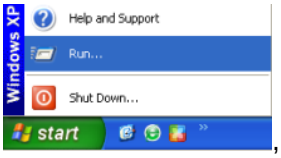
First, install the upper computer software in the computer;

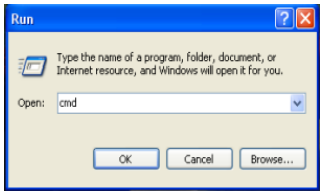
Connect VSP 112W and computer with cable, the connection diagram is as follows:



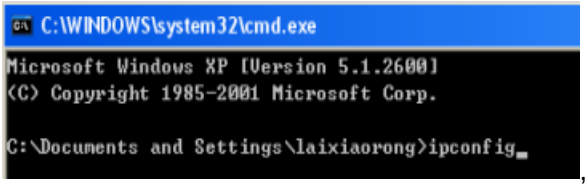
Power on VSP 112W, start the network function, specific steps are as follows:

The fist step: push MENU button ,get into MENU—SYSTEM—ETHERNET, check the IP address of the equipment, the equipment factory default IP address : 192.168.0.100.

The second step: check computer IP address, Mouse click start, choose Run 

,run <cmd> instruct 

,

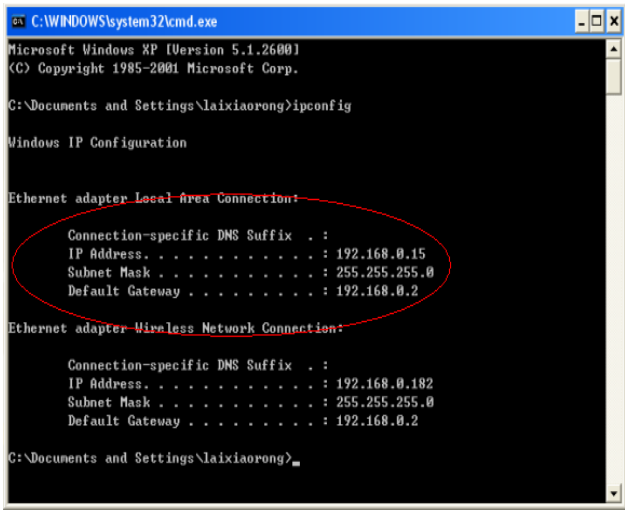
Click <OK>,run <ipconfig> 

,

<Enter> button,the IP address of the red circle display for the computer: 192.168.0.15 ;

5. Communication Software Guideline

How to Connect PC Through LAN Interface?


C:\WINDOWS\system32\cmd.exe
Microsoft Windows XP [Version 5.1.2600]
(C) Copyright 1985-2001 Microsoft Corp.
C:\Documents and Settings\laixiaorong>ipconfig
Windows IP Configuration
Ethernet adapter Local Area Connection:
Connection-specific DNS Suffix . :
IP Address. . . . . : 192.168.0.15
Subnet Mask . . . . . : 255.255.255.0
Default Gateway . . . . . : 192.168.0.2
Ethernet adapter Wireless Network Connection:
Connection-specific DNS Suffix . :
IP Address. . . . . : 192.168.0.182
Subnet Mask . . . . . : 255.255.255.0
Default Gateway . . . . . : 192.168.0.2
C:\Documents and Settings\laixiaorong>

The third step:Equipment IP address :192.168.0.100；

Computer IP address :192.168.0.15；

The four step :two IP address in the same band,192.168.0.XXX,the fourth section number is not the same,can communication connection line CAT5.

Note

If the computer IP address and equipment address are different,two IP address not in the same band,for example,the computer IP address is 218.032.010.201； Equipment IP address :192.168.0.100；

Solution 1:change the IP address of the video processor for :218.032.010.xxx。

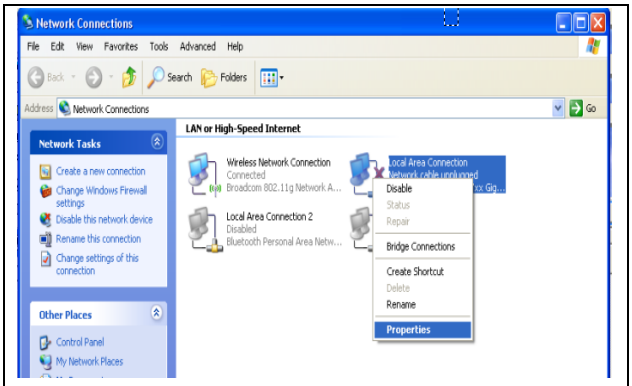
Change the IP address ,push <MENU> button ,enter into <MENU>--<SYSTEM>--<TTHERNET>--<IP ADDRESS>,you can change IP address， change the IP address of the video processor and computer's IP address in the same band，218.032.010.xxx，more detailed please refer to the operation of <MENU---SYSTEM>,Restart the processor.

Solution 2:change the computer IP address for 192.168.0.xxx；

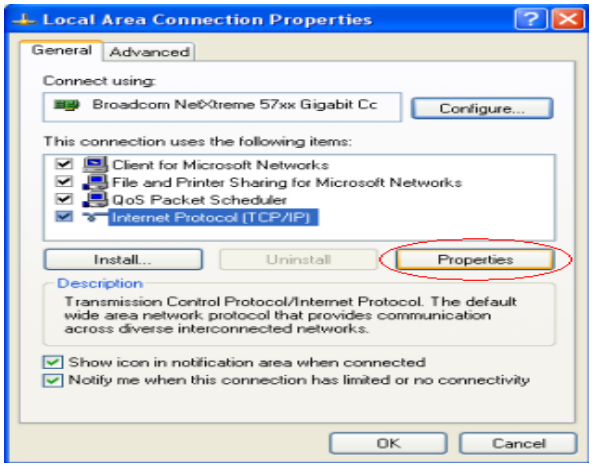
Open network connections,right click on properties,

5. Communication Software Guideline

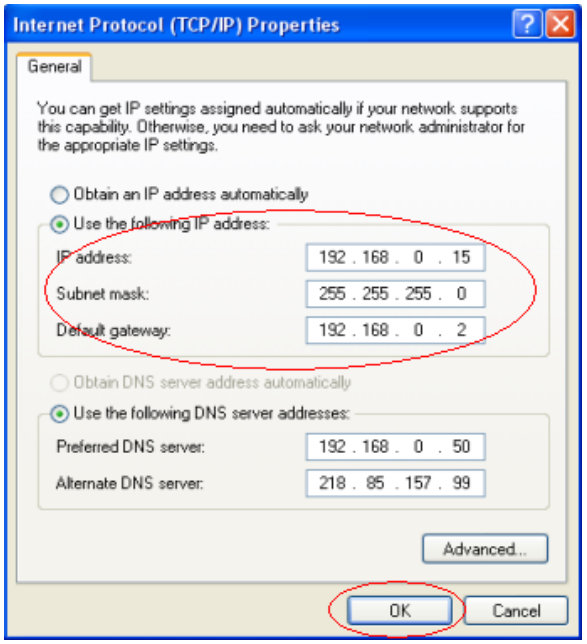
How to Connect PC Through LAN Interface?



,choose Internet protocol(TCP/IP),



Click properties,

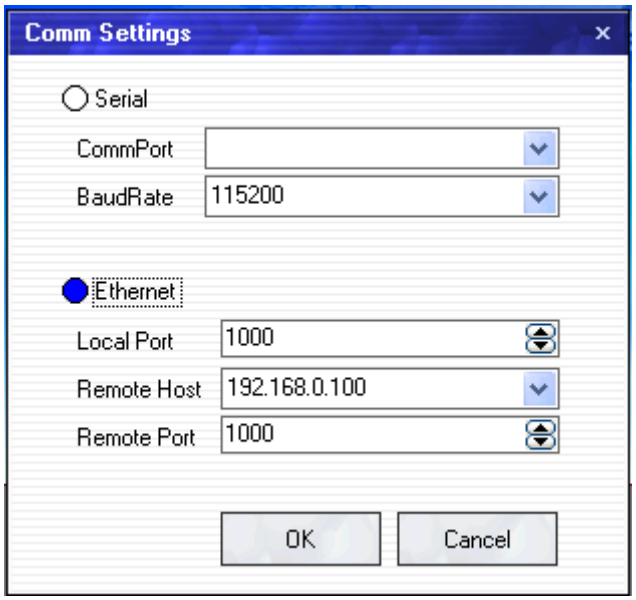

Internet Protocol (TCP/IP) Properties
General
You can get IP settings assigned automatically if your network supports this capability. Otherwise, you need to ask your network administrator for the appropriate IP settings.
Obtain an IP address automatically
Use the following IP address:
IP address: 192 . 168 . 0 . 15
Subnet mask: 255 . 255 . 255 . 0
Default gateway: 192 . 168 . 0 . 2
Obtain DNS server address automatically
Use the following DNS server addresses:
Preferred DNS server: 192 . 168 . 0 . 50
Alternate DNS server: 218 . 85 . 157 . 99
Advanced...
OK
Cancel

you can change IP address，change the IP address of the video processor and computer's IP address in the same band,192.168.0.XXX；

5. Communication Software Guideline

How to Connect PC Through LAN Interface?

The fiver step :Open the upper computer software, click , interface is shown as Choose [Ethernet];



Input IP address, click [OK].

Click to open the serial port, check the if the [Comm] icon in the lower-right corner of the control software interface is green, and log outputs information smoothly, then it can control the device through PC software.

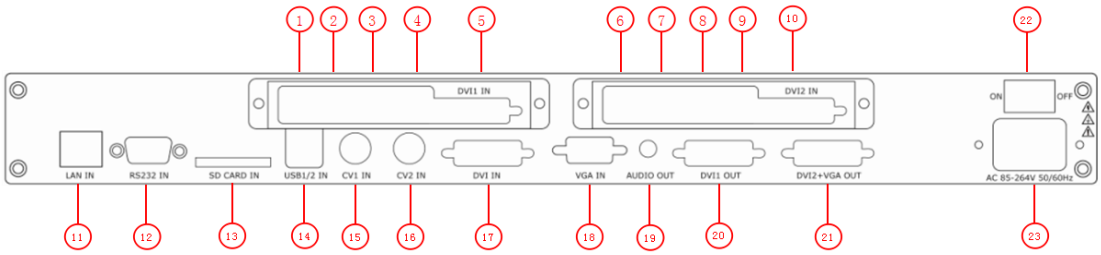
6. System Setup and Operations

In This Chapter

This chapter provides comprehensive instructions for system setup and operations. The following topics are discussed:

- Interface and Input Signal Option
- How to Confirm the Device is in Normal Operation
- How to choose the language on the LCD
- How to Adjust the Output Resolution
- How to Realize Single Image Switching
- How to Set up the Size and Position of Signal Image
- How to Realize Screen Size and Full Size Switching
- How to Edit the Program
- How to Set Router VPN
- How to Save the Parameter
- How to Load the Saved Parameter
- Usage of SD Card and USB

Interface and Input Signal Option



NO	INTERFACE	NO	INTERFACE
1.2.6.7.11	10/100M Interface RJ45	17	DVI Input DVI-I
3.8	Power supply port of Sending Card	18	VGA Input DSUB15 port
4.9	USB control port of Sending Card	19	Audio Output
5.10	DVI input port of sending card	20	DVI Output DVI-I
12	RS232 Interface	21	DVI+VGA DVI-I Output
13	USB input port	22	Switch
14	SD card input	23	Power IEC-3 port
15.16	CVBS Input BNC port		

20. DVI1 have default the main image output , use for connecting the sending card of led screen. VSP 112W support resolution format as following:

800x600x60Hz, 1024x768x60Hz, 1024x768x75Hz, 1280x720x60Hz, 1280x720x50Hz, 1280x768x60Hz, 1280x800x60Hz, 1280x1024x60Hz, 1360x768x60Hz, 1366x768x60Hz, 1400x1050x60Hz, 1440x900x60Hz, 1600x1200x60Hz,1680x1050x60Hz,1920x1080x60Hz,1920x1080x50Hz, 1920x1200x60Hz, 2048x1152x60Hz, 2560x812x60Hz, 2560x816x60Hz.

Note

Same as MENU →OUTPUT→ OUTPUT FORMAT or OUT key.

21. DVI2 + VGA output interface default for preview, mainly through the display preview will output signal, the output signal for DVI video signal and VGA video signal, may meet with DVI interface or VGA interface display and display equipment signal images look prison. Through the DVI - I interface output signal (Preview adopt standard DVI - I interface, compatible VGA output, through the terminal adapter VGA output; The resolution of the output support for: 800x600x60Hz,1024x768x60Hz,1024x768x75Hz,1280x720x60Hz, 1280x720x50Hz, 1280x768x60Hz, 1280x800x60Hz, 1280x1024x60Hz, 1360x768x60Hz, 1366x768x60Hz, 1400x1050x60Hz, 1440x900x60Hz, 1600x1200x60Hz,1680x1050x60Hz,1920x1080x60Hz,1920x1080x50Hz, 1920x1200x60Hz, 2048x1152x60Hz, 2560x812x60Hz, 2560x816x60Hz.
In addition to CONT part and send card and power interface outside, other interface for video signal input interface,

CVBS（BNC Port）Can receive standard video signal from players, cameras etc. Input supported resolution 480i and 576i via BNC. Supported standards include: PAL, NTSC and SECAM.

USB（USB Port）Can access the USB device or mobile hard disk with USB storage function. Mainly used to store video program package.

DVI（DVI-I Port）Computer graphics interface may receive the DVI output interface can also through the DVI turn HDMI cable to connect the computer graphics HDMI output or DVD HDMI output;

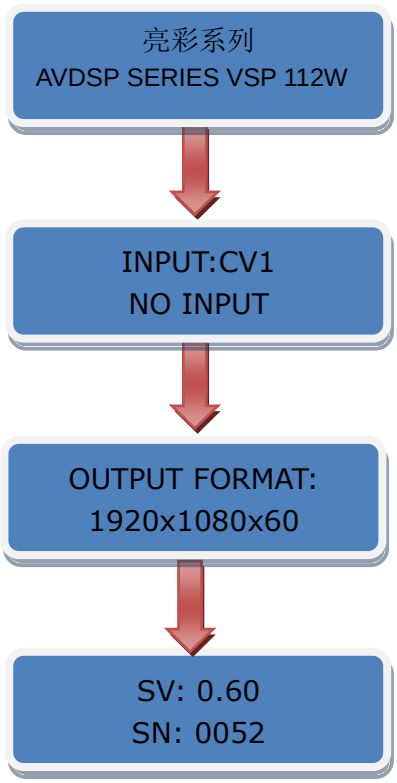
VGA（DB15 Port）Can support HD player, computer, video signal. Through the DB15 interface input signal.

22. Power：Power has been already supplied for video processor

23. AEC Port：AC 85-264V 3.8A 50/60Hz IEC-3 Power Interface.

How to Confirm the Device is in Normal Operation

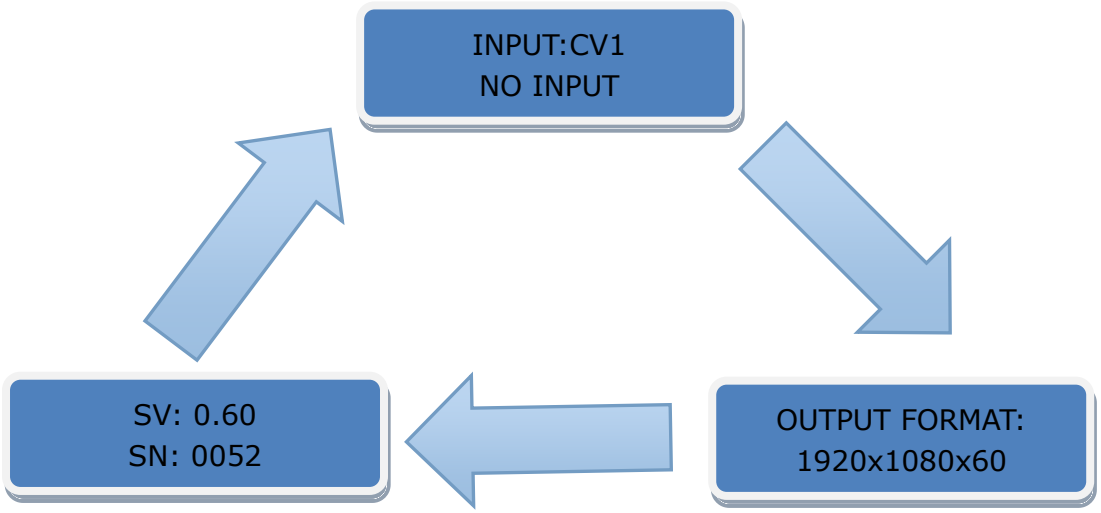
1. Firstly , make sure the power of device setup
2. After power on , the fans running , the button scanning
3. After the button scanned, the device operate, the LCD display that:



6. System Setup and Operation

How to Confirm the Device is in Normal Operation

4. After the start, the completion of equipment factory default call parameter or save1 system parameters, CV1 key light is lit up; System into the circulation state: circulation process indicates that the current input signal source, the current output format, the current program version information, the current equipment serial number, the user hold equipment serial number will get more effective service and support.



5. System into the circulation state of equipment for the normal starting.

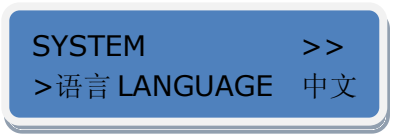
How to Choose the Language on the LCD

1. Press MENU button, enter menu option, press UP/DOWN button, and choose [LANGUAGE 语言] option.

2. Press SEL button，change the status of option“**>**”to“*****”:

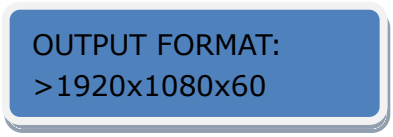
3. Press UP/DOWN button again, change the default “ENGLISH” to “Chinese”.

4. After finishing, press SEL button to confirm, the LCD display “ENGLISH” has been changes to “Chinese”.

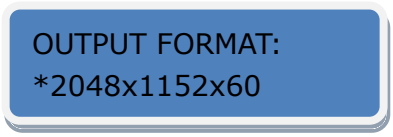


How to Adjust the Output Resolution

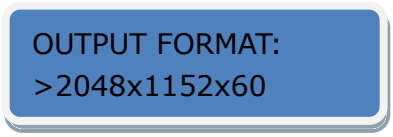
1. Press OUT button, enter output format option:



2. Press UP/DOWN button, choose the required resolution. for example: 2048x1152x60;



3. Press SEL button, finish the choice of resolution.

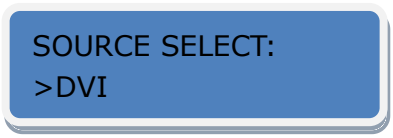


Note

Same as MENU → OUTPUT → OUTPUT FORMAT

How to Realize Single Image Switching

Boot the system default CV1 to the current input source (key light and scintillation), if need seamless switching other source such as DVI, direct light touch DVI key, LCD screen display as follows



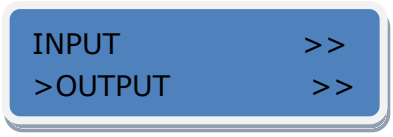
Choose DVI buttons, CV1 key light is off, and DVI key lights and shining, can realize single picture of input signal source switching (input signal source by original CV1 switching to DVI).The same method can be switched CV2, VGA, USB.

Note

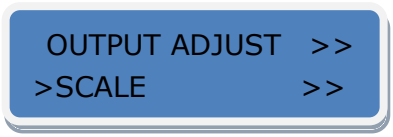
Seamless switch: means signal switch will not appear any flash point, black, shaking or delay

How to Set Up the Size and Position of the Single Image

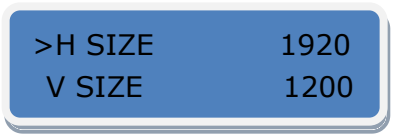
1. Press MENU button, enter the menu option. Press UP/DOWN button, choose the [OUTPUT] option.

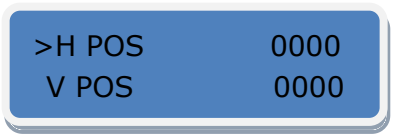


2. Press SEL button to confirm, then press UP/DOWN button, choose [SCALE] option.



3. Press SEL button, and set the required value, press SEL button to confirm.





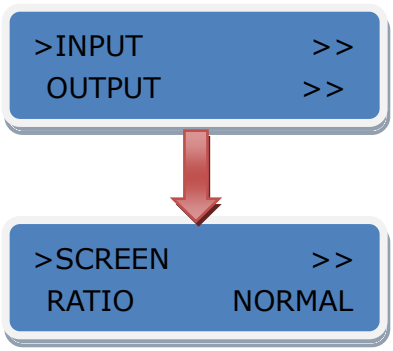
4. After finish, press MENU to return to top level menu.

Note

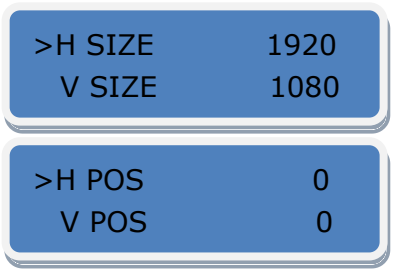
The [SCALE] button can also fulfill this setting.

How to Realize the Screen Size and Full Size Switching

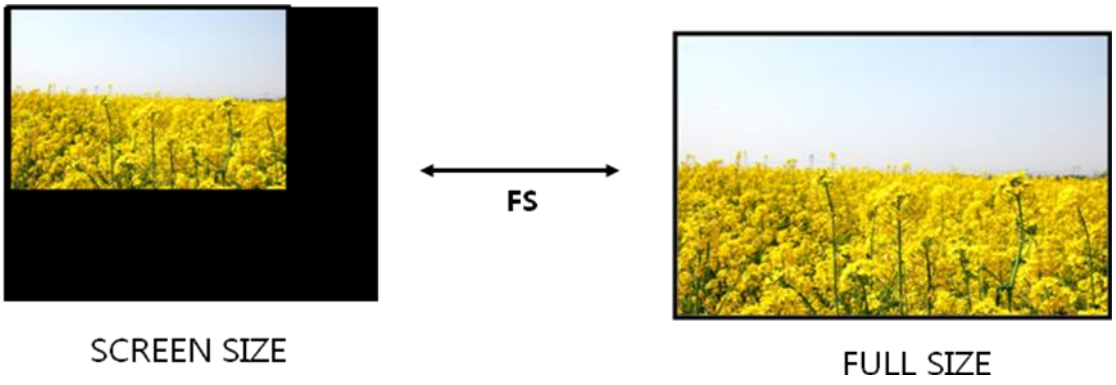
1. Press MENU button, through UP/DOWN button, choose [OUTPUT], and choose [SCREEN] option:



2. Press SEL to confirm, according to user needs, can be shown on the screen size and position are Settings:



3. When setup is completed, choose the option SCREEN SIZE or FULL SIZE in [MODE] option in the [SCREEN], it can realize the screen size and full size switching.

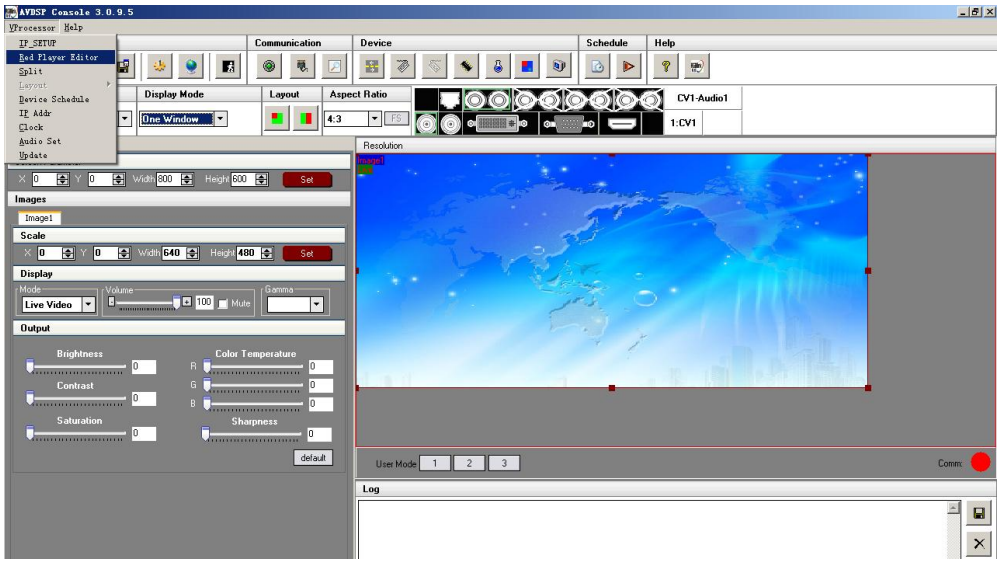


Note

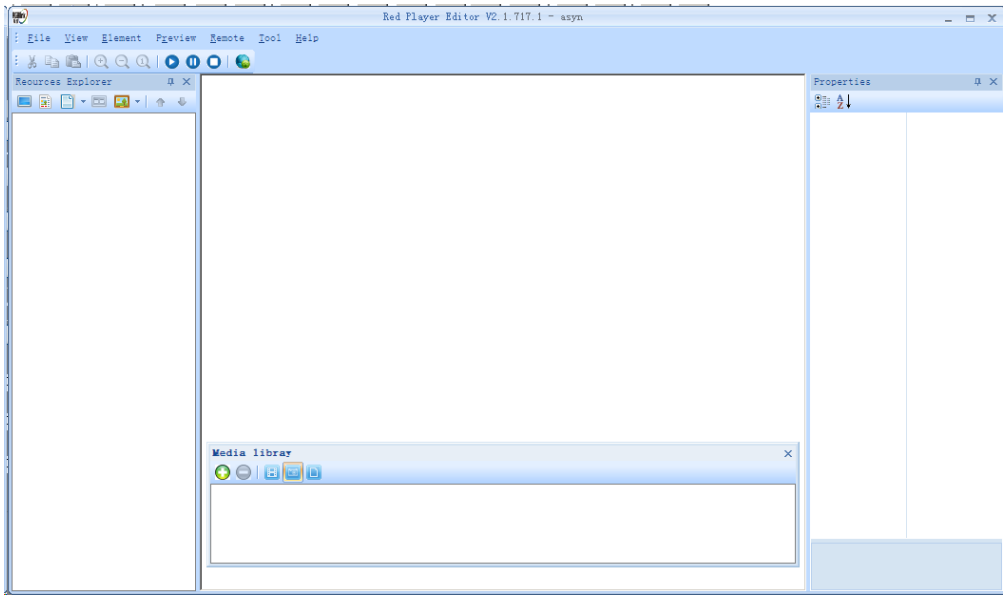
The [FS] button can also fulfill this setting.

How to Edit the Program

Open the VSP 112W PC software, choose “Red Player Editor” option in [VProcessor], shown as follows:



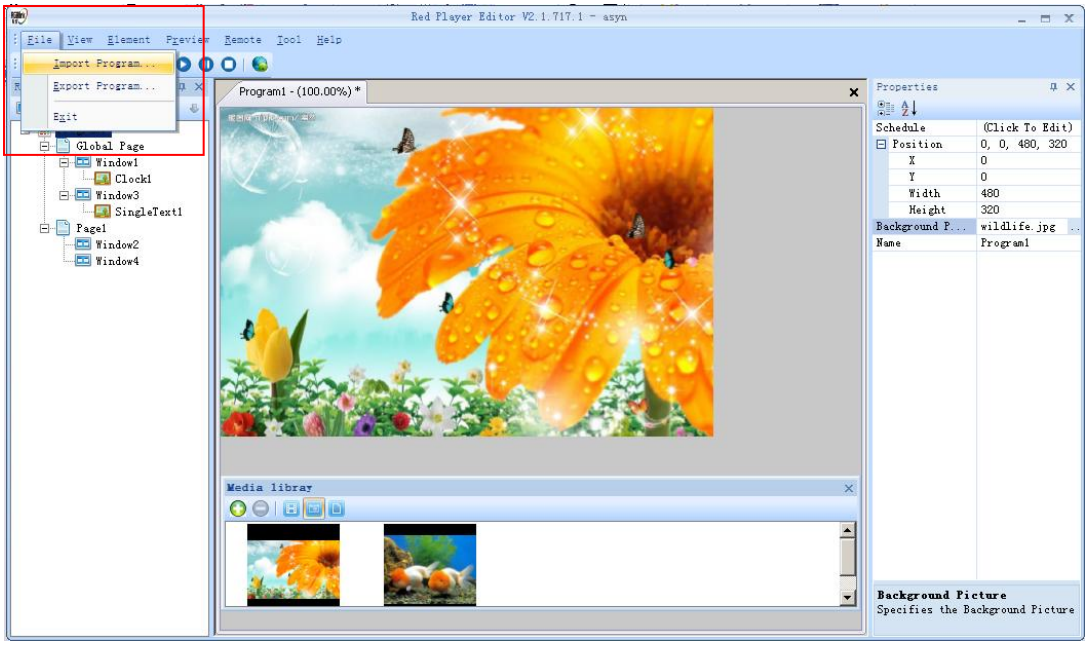
Red Player Editor interface is as follows:



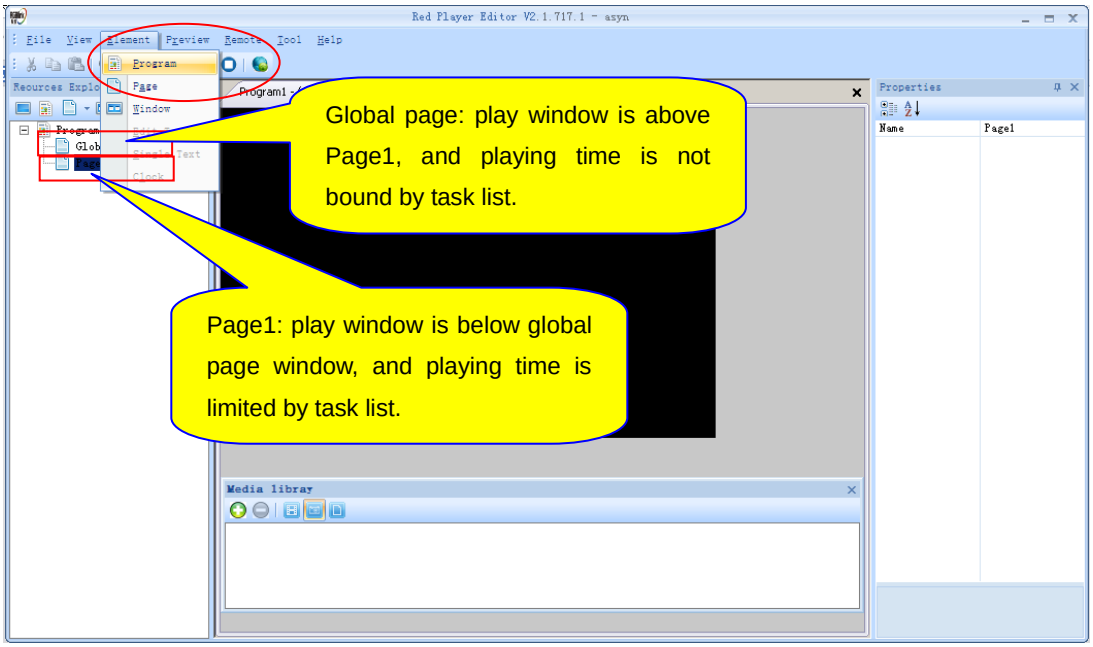
6. System Setup and Operation

How to Edit the Program

1. Import and export program, user can export the edited program.



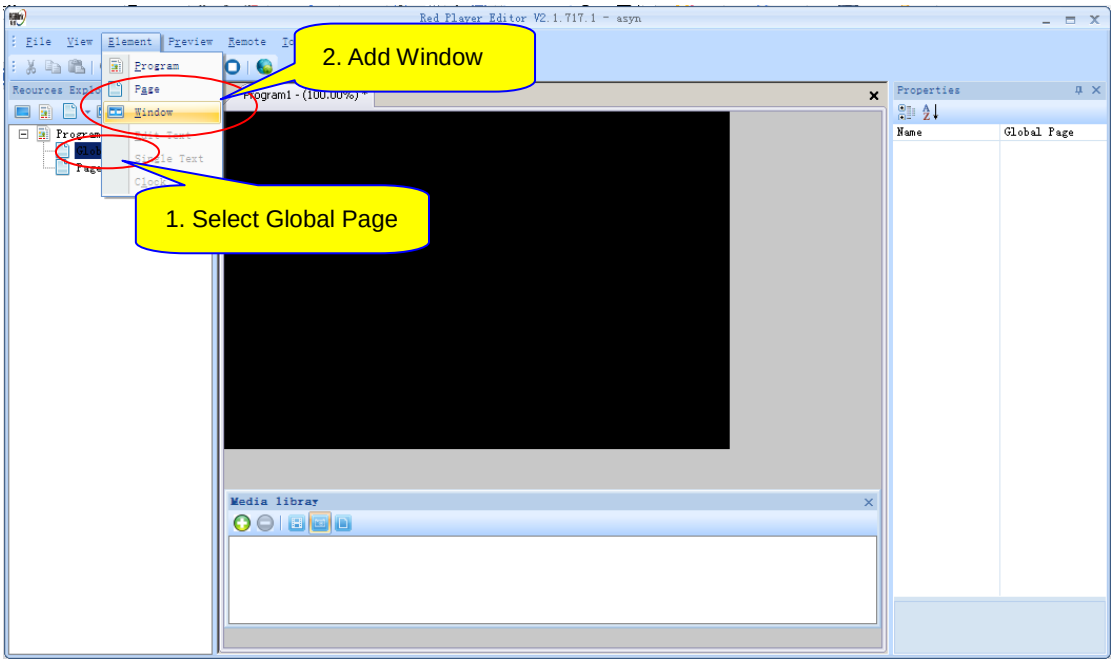
2. Add program


Red Player Editor V2.1.717.1 - asyn
File View Element Preview Remote Tool Help
Program
Page
Window
Media library
Properties
Name Page1
Global page: play window is above Page1, and playing time is not bound by task list.
Page1: play window is below global page window, and playing time is limited by task list.

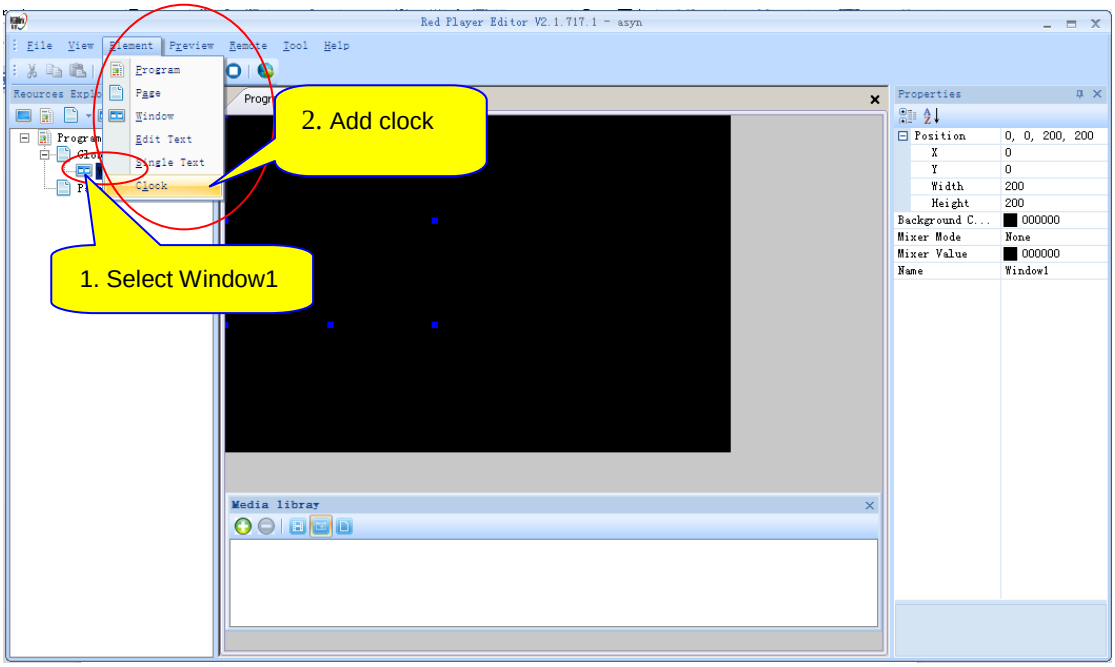
6. System Setup and Operation

How to Edit the Program

3.1 Display clock



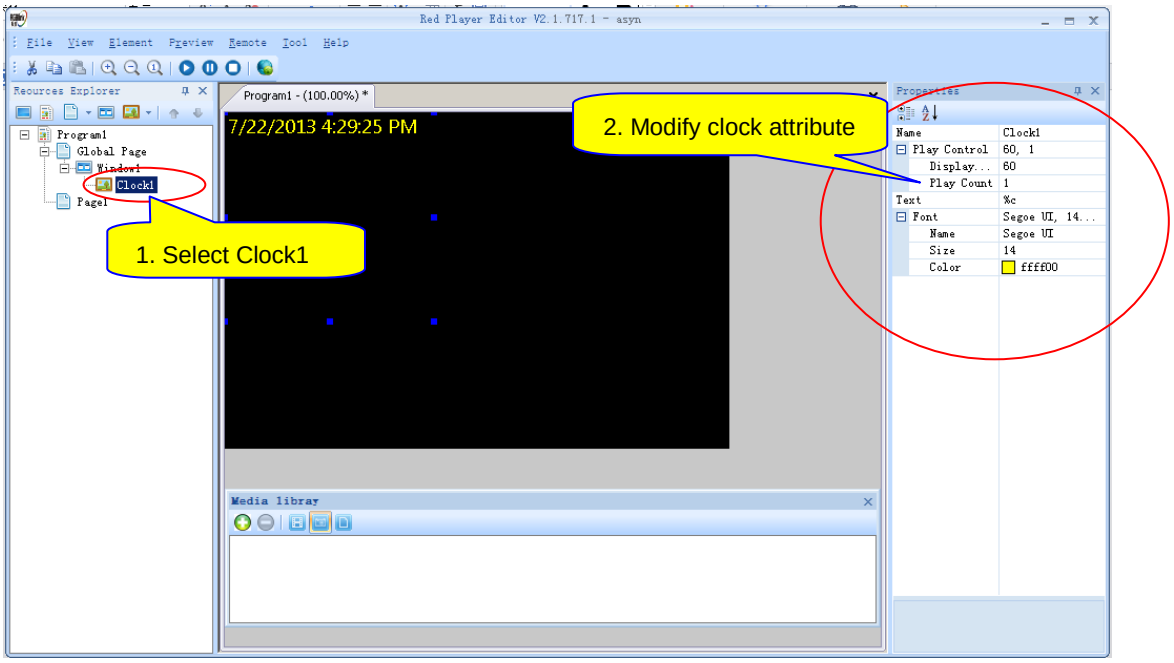
3.2 Add clock in play window



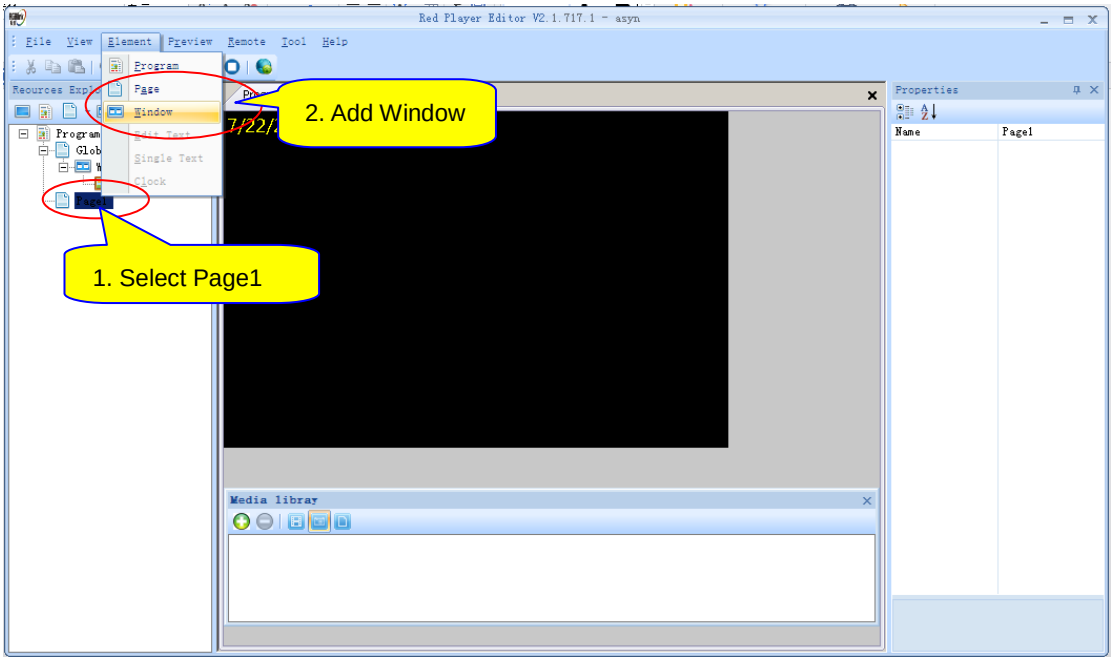
6. System Setup and Operation

How to Edit the Program

3.3 Modify clock attribute



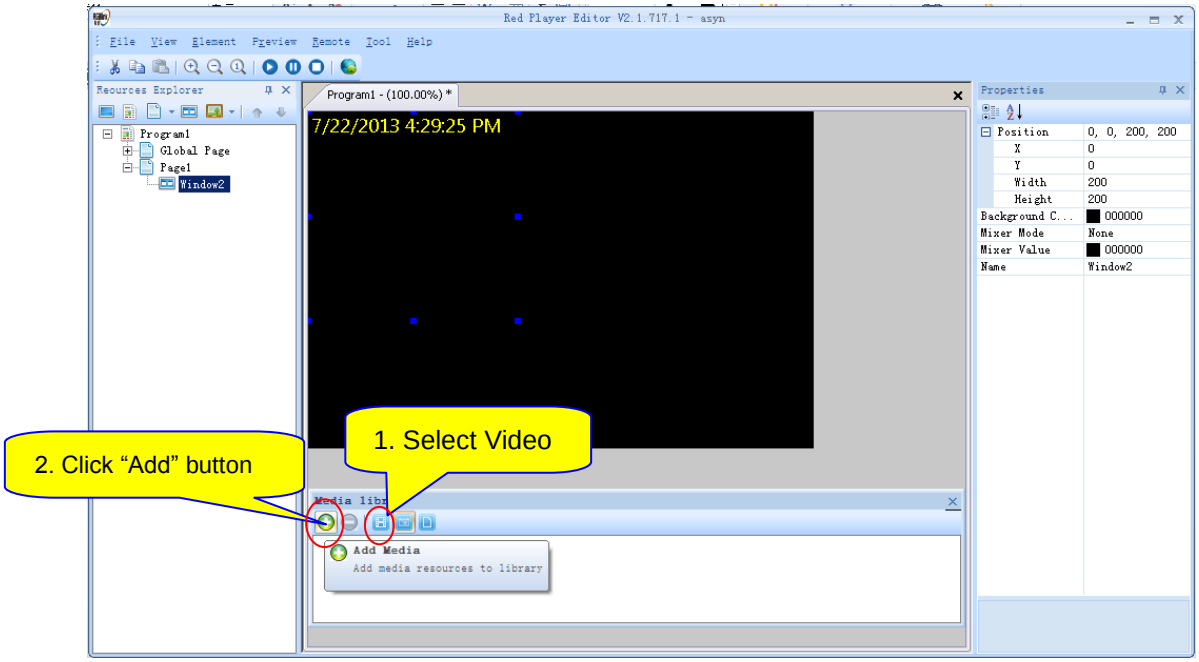
4.1 Video play



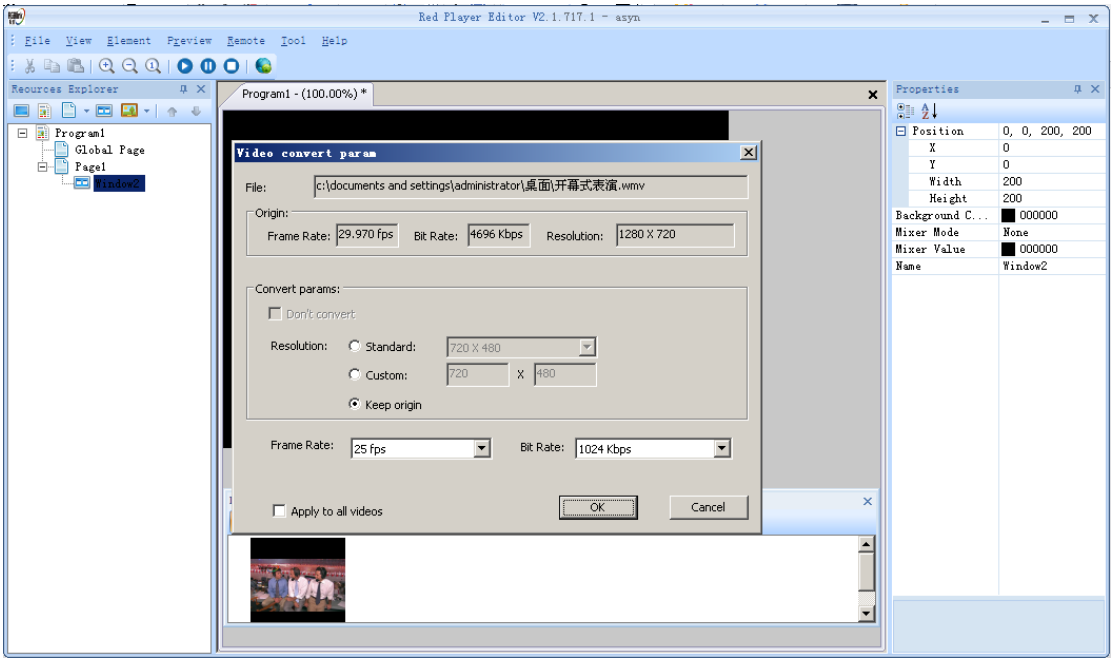
6. System Setup and Operation

How to Edit the Program

4.2 Add video file in media library



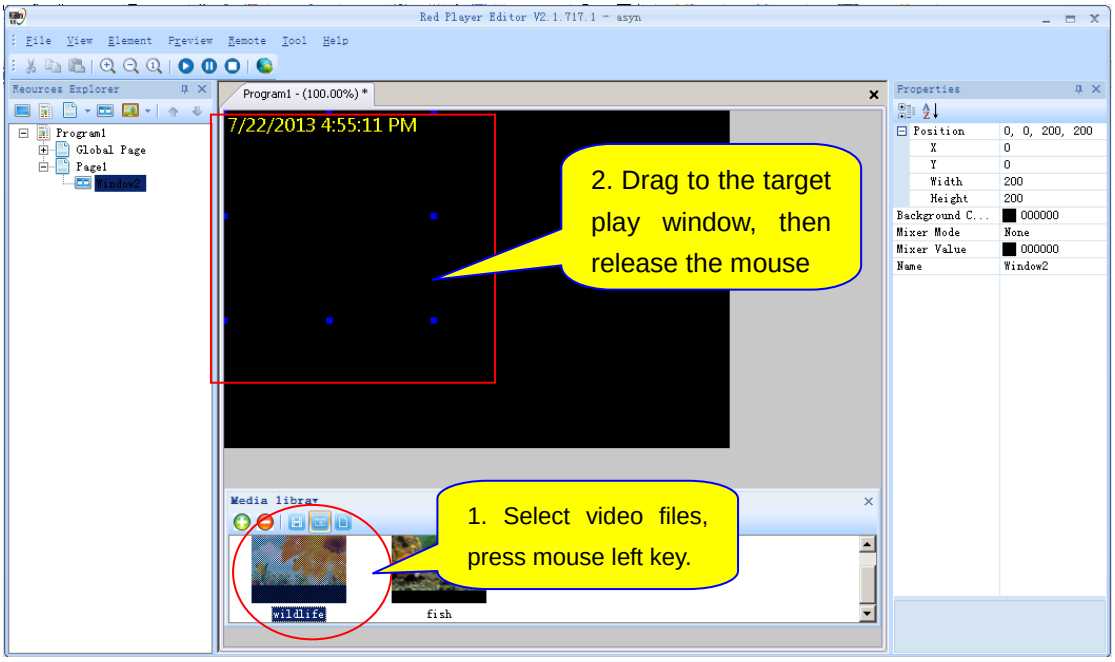
4.3 Set video file conversion parameters



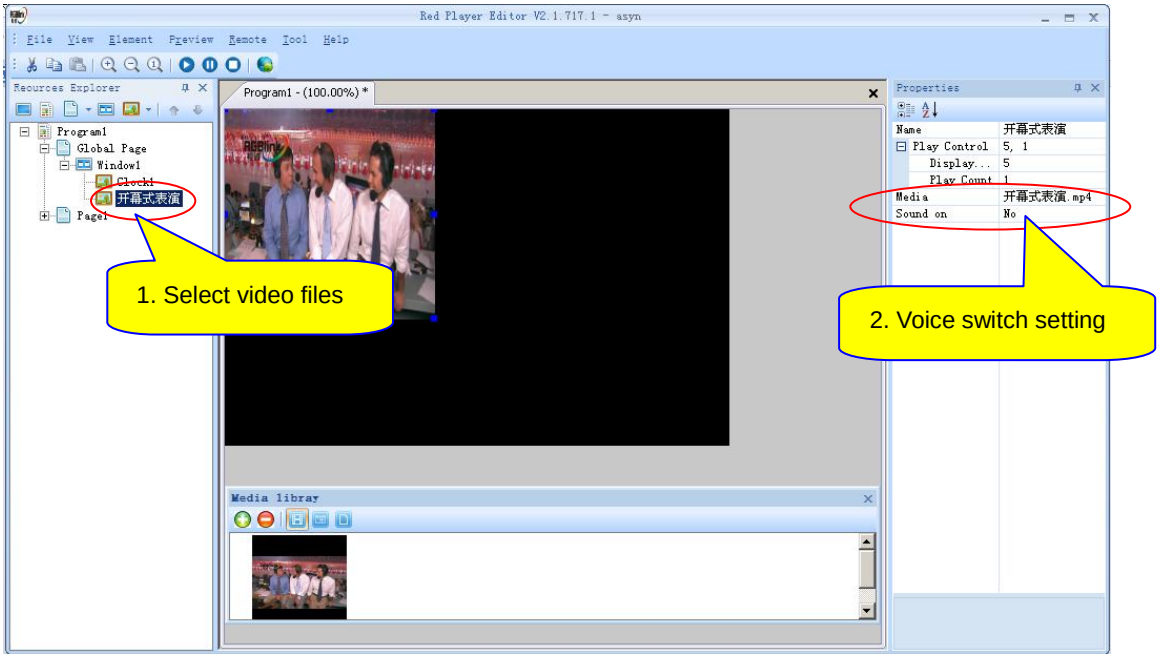
6. System Setup and Operation

How to Edit the Program

4.4 Drag the video in media library to play window



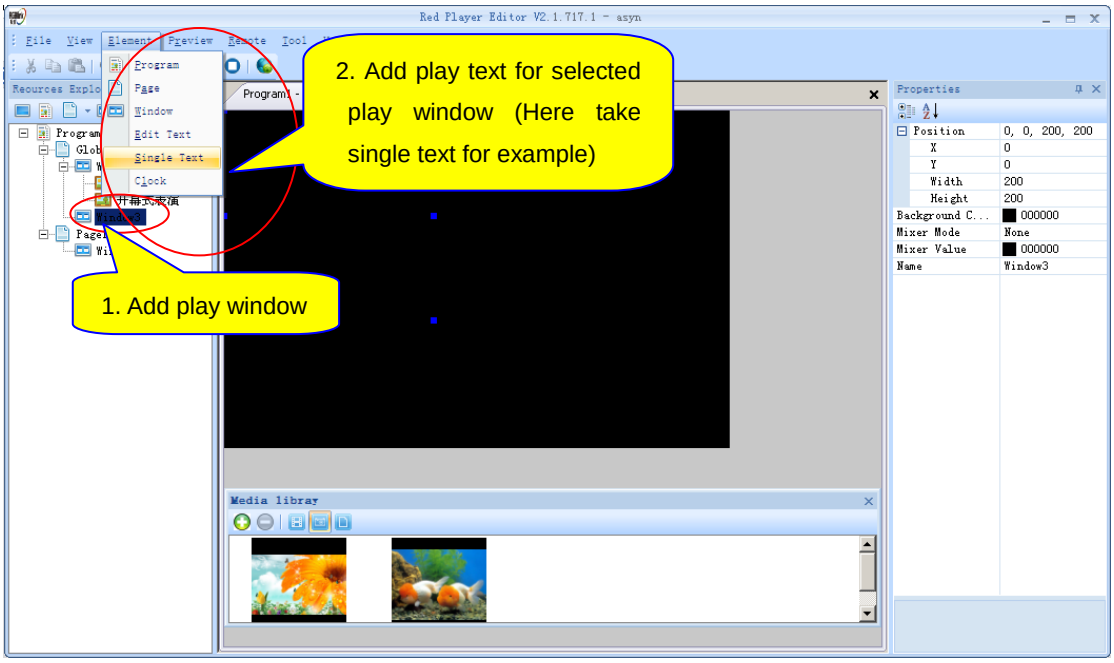
4.5 Video voice switch



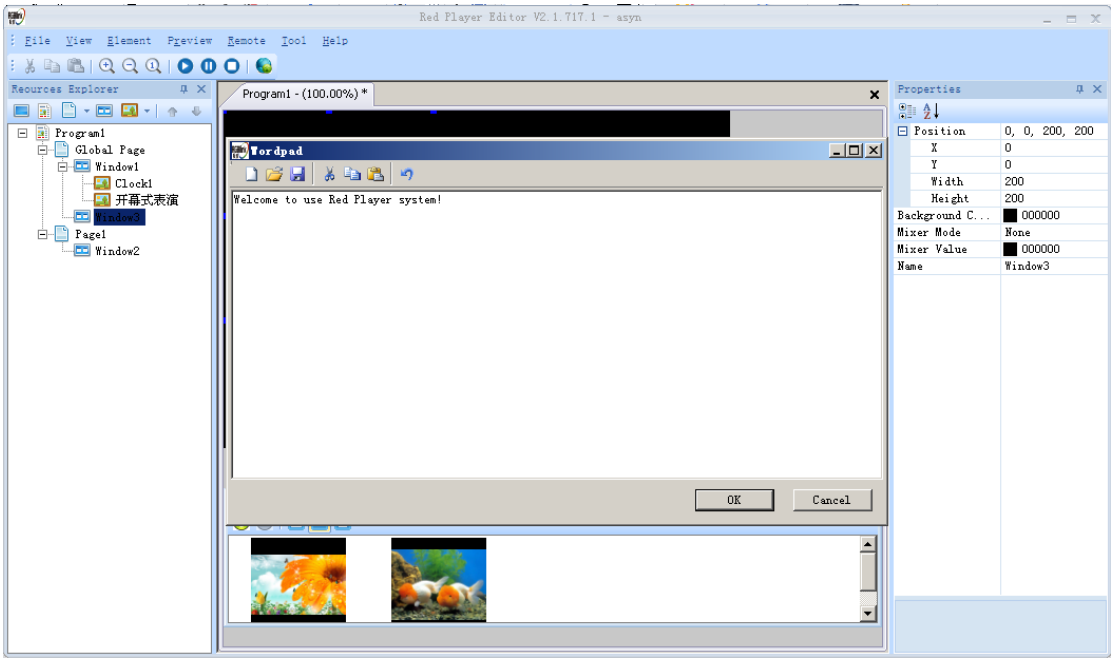
6. System Setup and Operation

How to Edit the Program

5.1 Broadcast Text



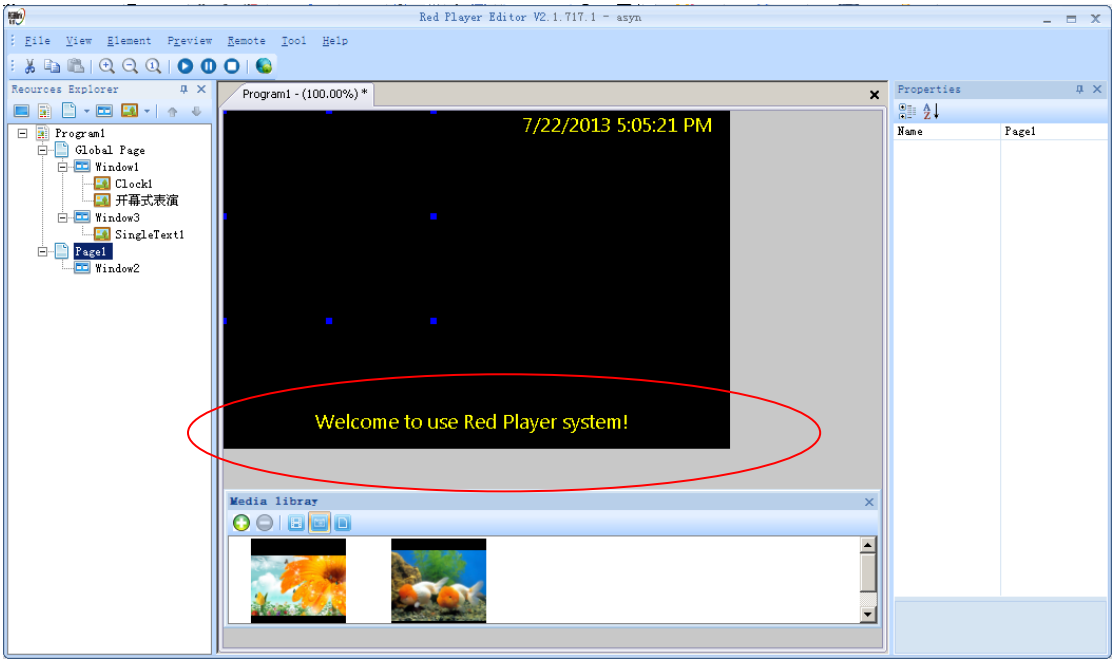
5.2 Edit broadcast text in pop-up edit box



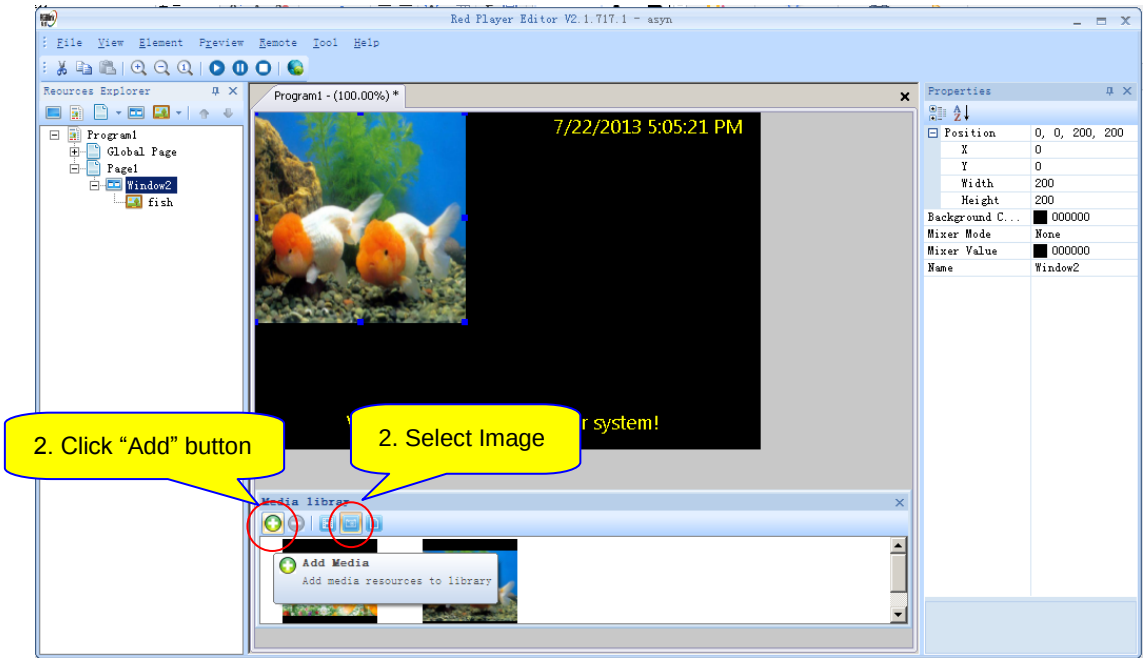
6. System Setup and Operation

How to Edit the Program

5.3 Adjust the position of text play window, can adjust by dragging the mouse or properties window on the right side.



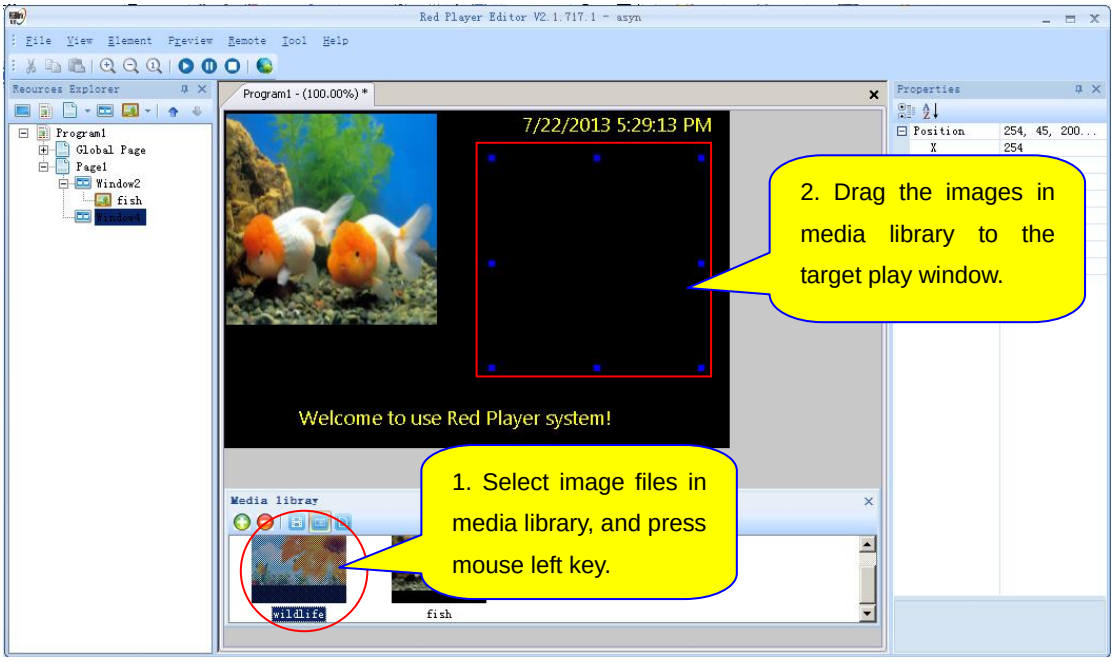
6.1 Image play, Import images to media library.



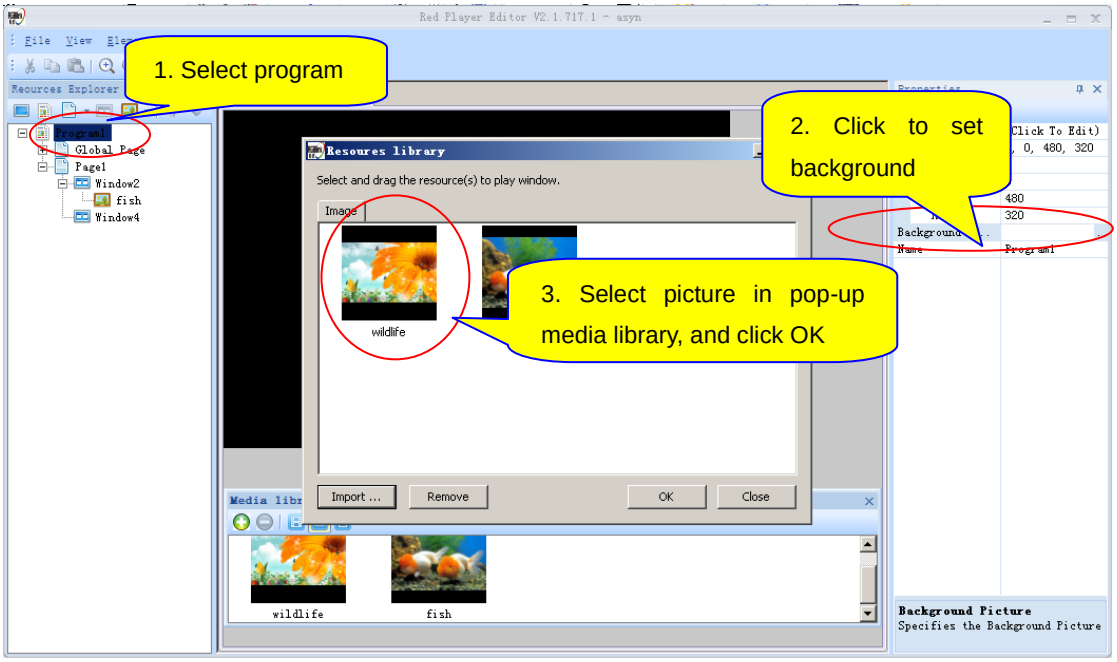
6. System Setup and Operation

How to Edit the Program

6.2 Add image files in media library to play window



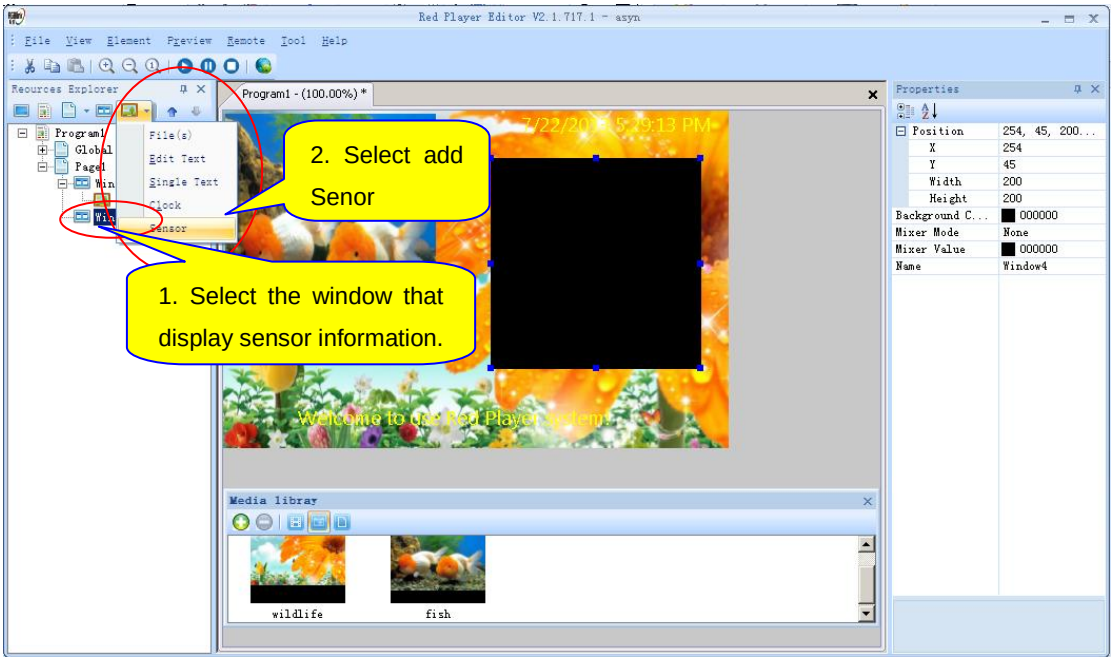
6.3 Add program background picture



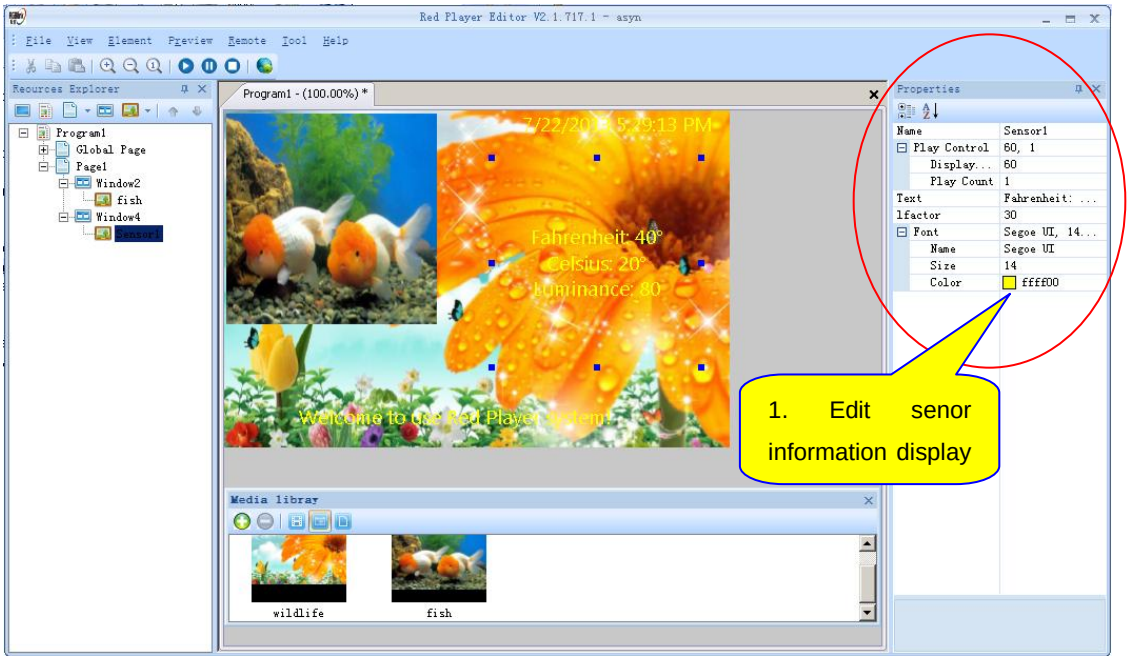
6. System Setup and Operation

How to Edit the Program

7.1 Display sensor information



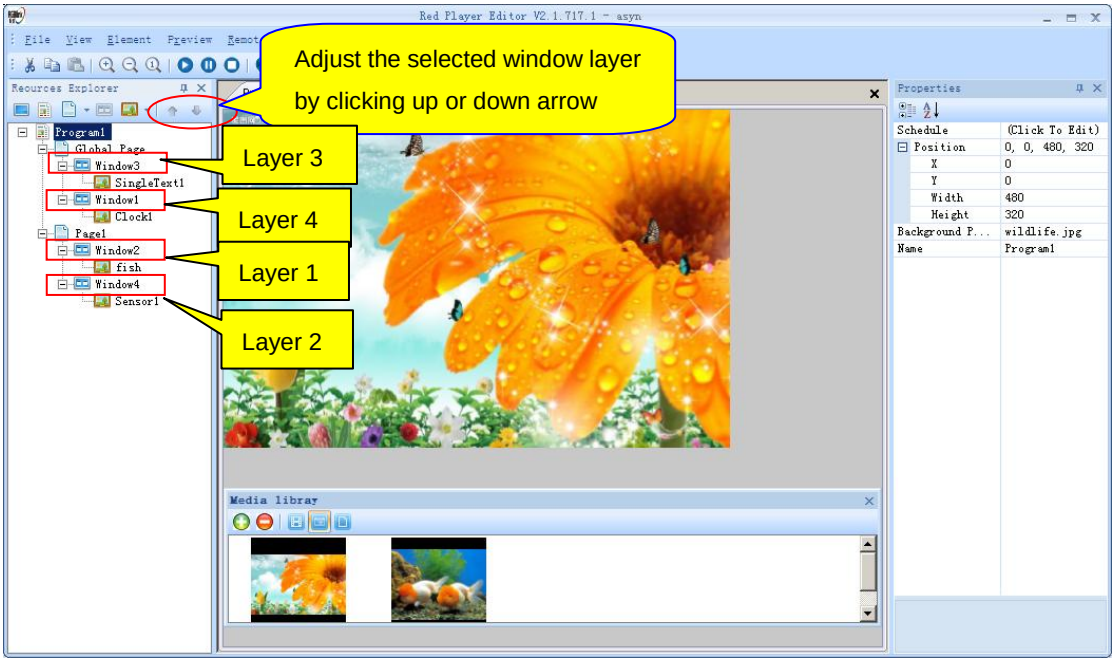
7.2 Edit sensor information display format



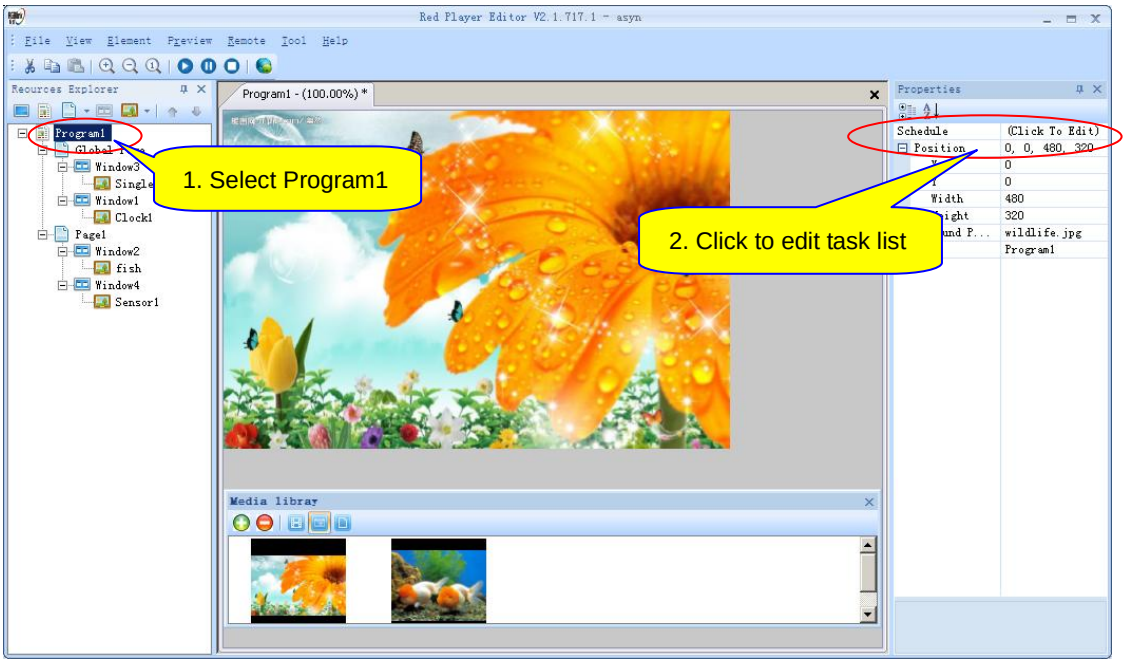
8. Adjust play window layer, as follows: play window of Global Page is above Page1 play window, that is Global Page covers Page1. Layer relationships in Page1 play window are: more from the back play window rows the layer appears higher, as shown below, Window4 covers Window2.

6. System Setup and Operation

How to Edit the Program



9.1 Edit program task list

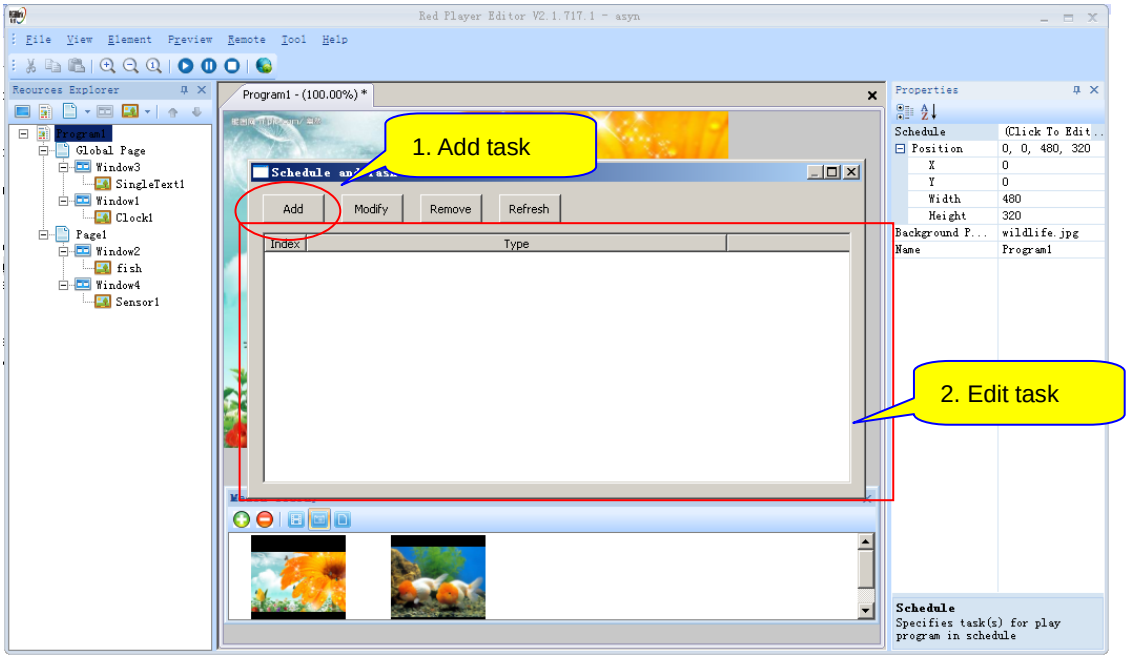


9.2 Edit task list

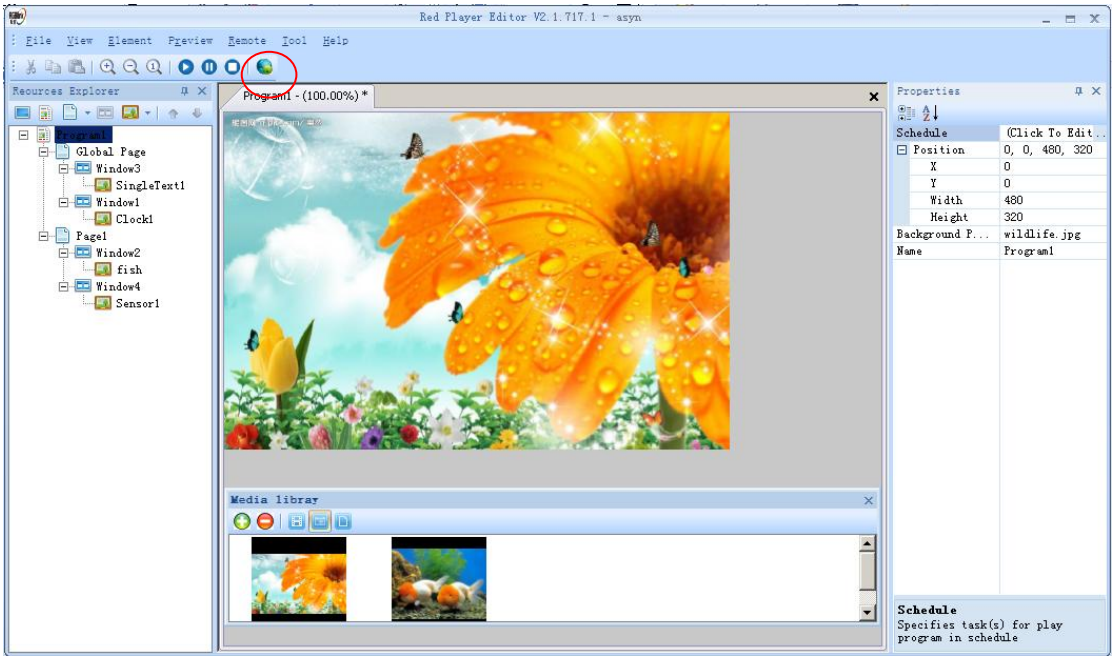
Play mode: 1. Normal means continuously play from beginning to the end, if set invalid week, it will not play in invalid week; 2. Interval means play from the starting time to end time between the start date and end date. If the starting time is greater than the end time, it will span the midnight to the end time of the second day. For example, if set starting time for 2012/1/1 12:00:00, and the end time is 2012/1/5 8:00:00, then program will play from 2012/1/1 12: 00:00 to 2012/1/2 8:00:00, because it is before its play time, it will play again on 2012/1/2 12:00:00.

6. System Setup and Operation

How to Edit the Program



10.1 Publish the edited program



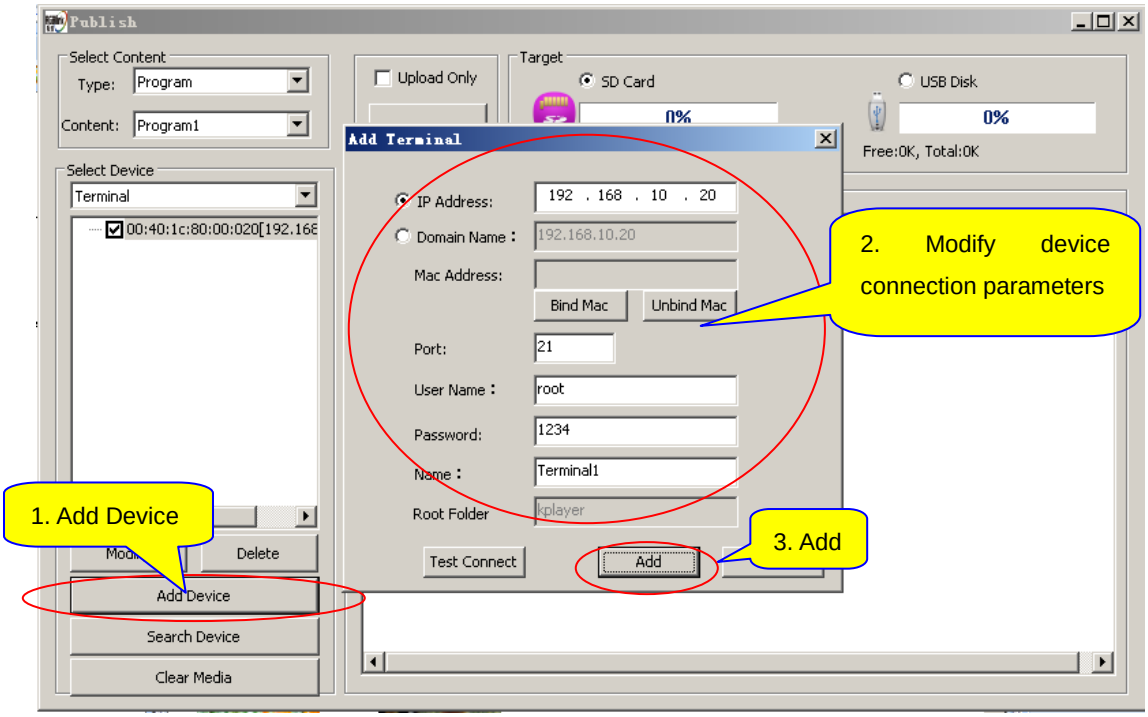
10.2 Add Terminal Device

Known IP: manually input IP address and add terminal;

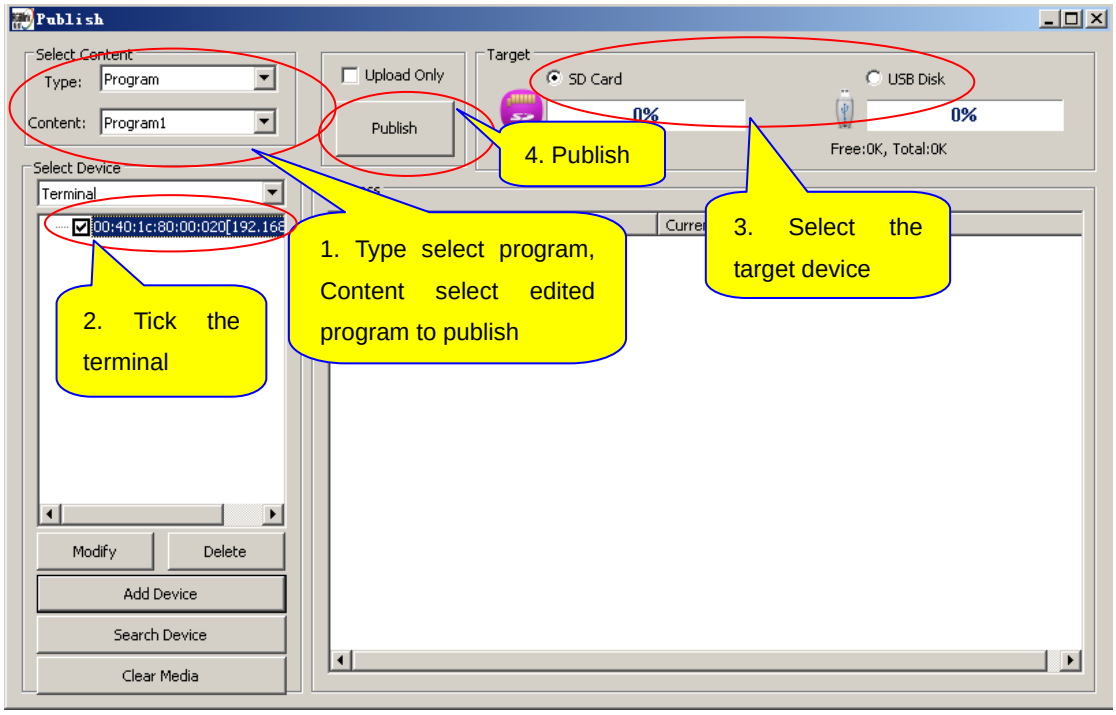
IP automatic retrievals: When PC and asynchronous control card access the same LAN, and both are dynamic access IP, click "search" in publish window to search device, then the device will be automatically added to the terminal list.

6. System Setup and Operation

How to Edit the Program



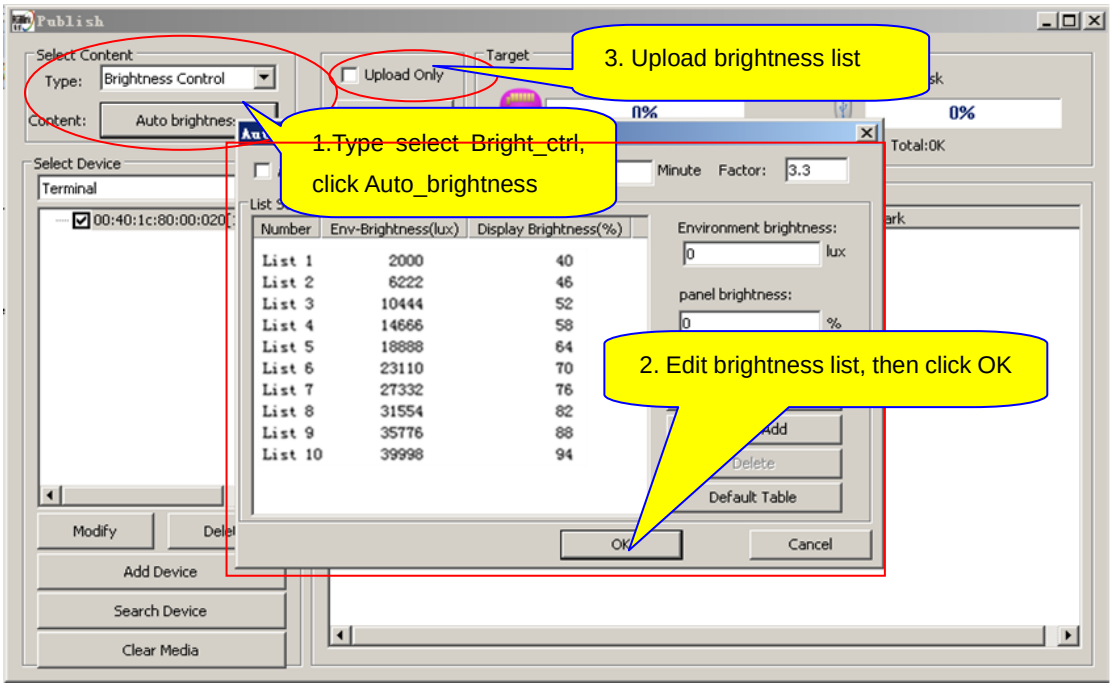
10.3 Publish program



6. System Setup and Operation

How to Edit the Program

10.4 Upload auto brightness control. Set brightness list, then publish as upload program.

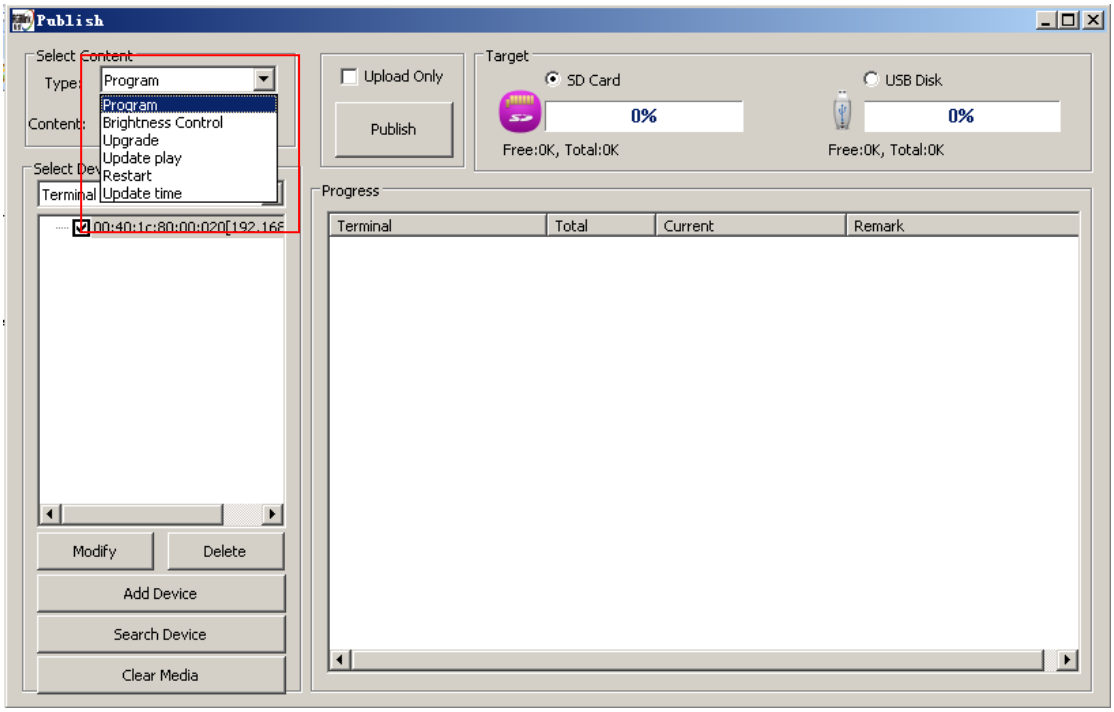


10.5 Asynchronous control card publish introduction. As shown below, the main publish types include:

1. **Program:** Program list, can be uploaded to the terminal program;
2. **Bright_ctrl**：Automatic brightness control, Led display brightness will change according to the list ambient brightness;
3. **Upgrade**: Upgrade asynchronous control card;
4. **Update play**;
5. **Restart**: Restart asynchronous control card;
6. **Update time:** Update asynchronous control card time (Set to PC current time)

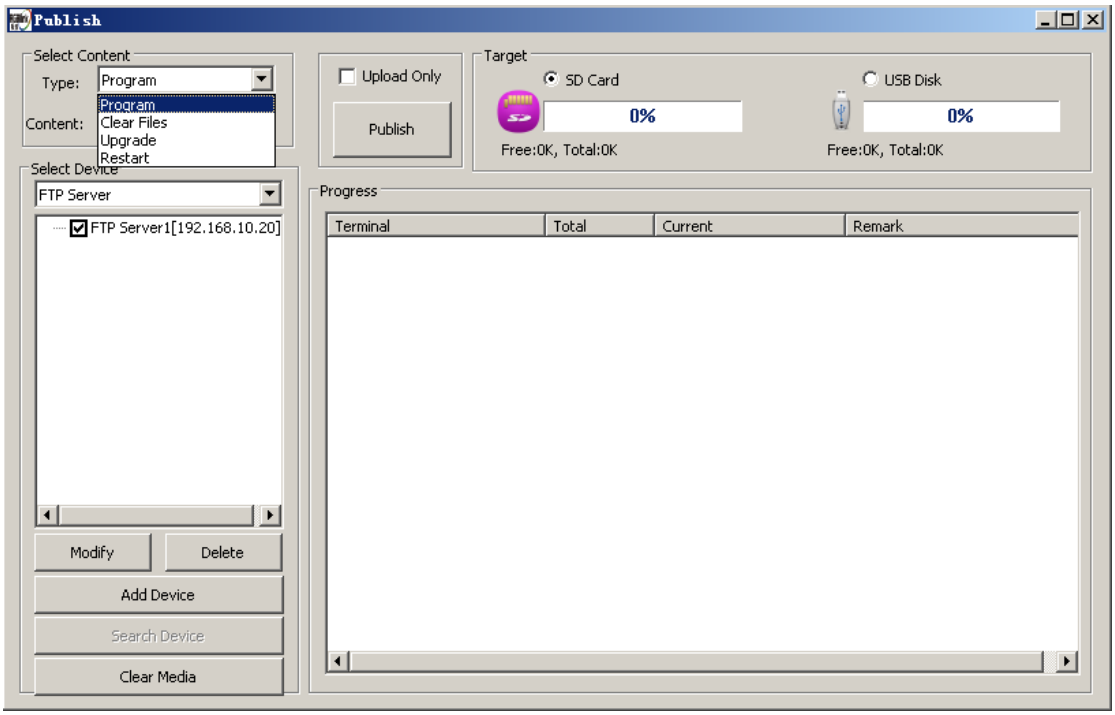
6. System Setup and Operation

How to Edit the Program



10.6 FTP server publish introduction. As shown below, the main publish types include：

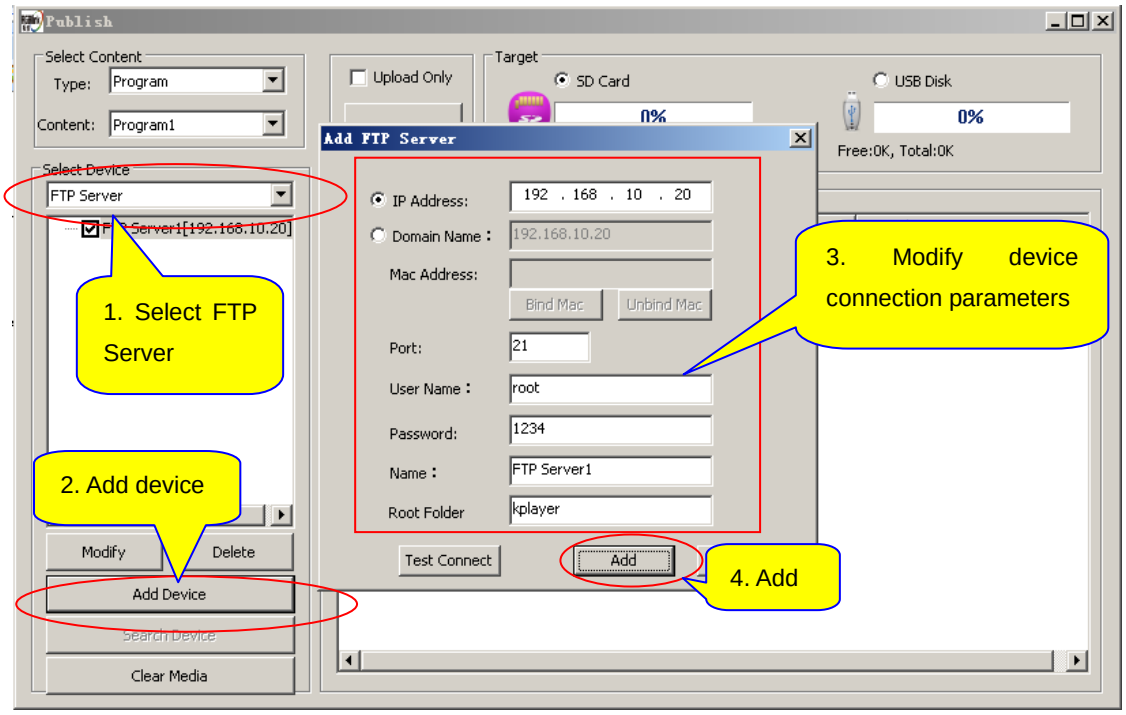
1. **Program:** The program that get from asynchronous control card timing to the server.
2. **Clear Files:** Remote clear the asynchronous control card media files;
3. **Upgrade:** Remote upgrade the asynchronous control card;
4. **Restart:** Remote restart the asynchronous control card;



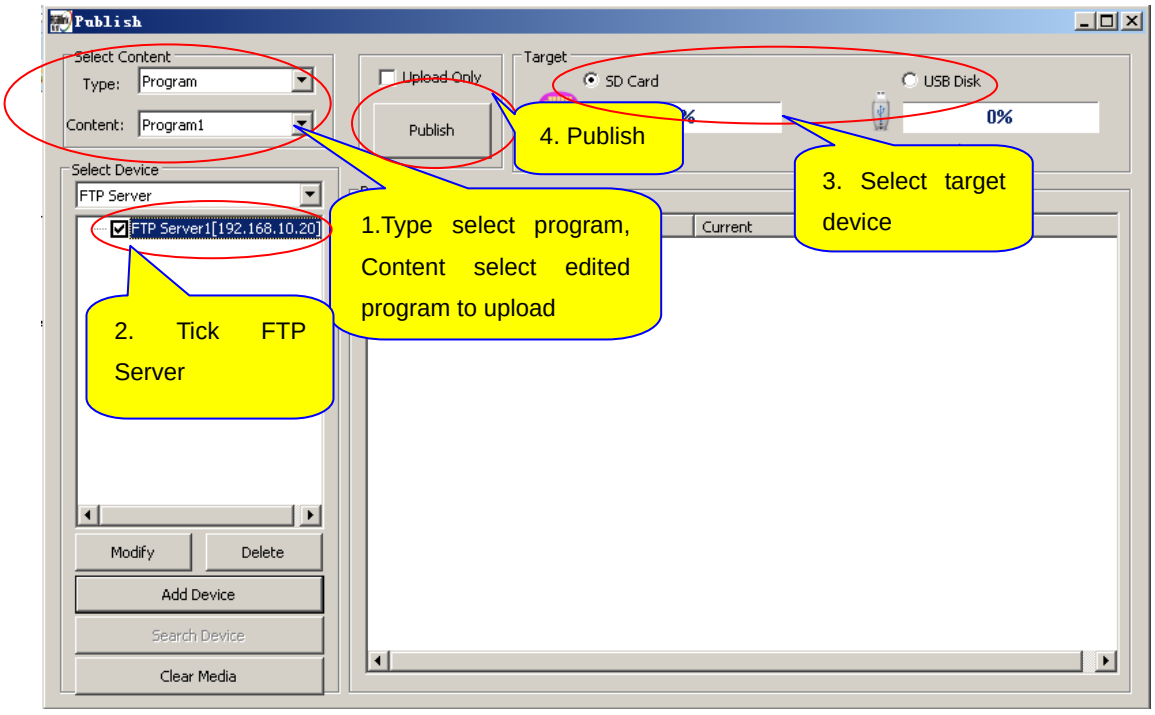
6. System Setup and Operation

How to Edit the Program

11.1 Publish program to FTP Server. First, add Ftp server, as follows:



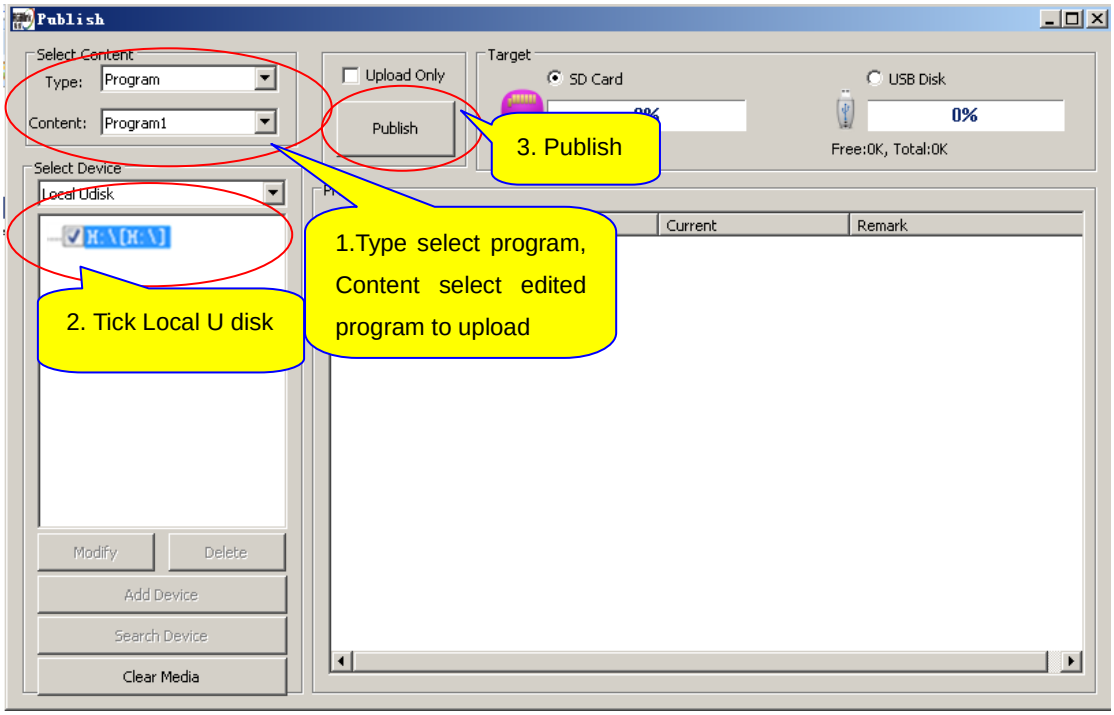
11.2 Upload program to FTP Server



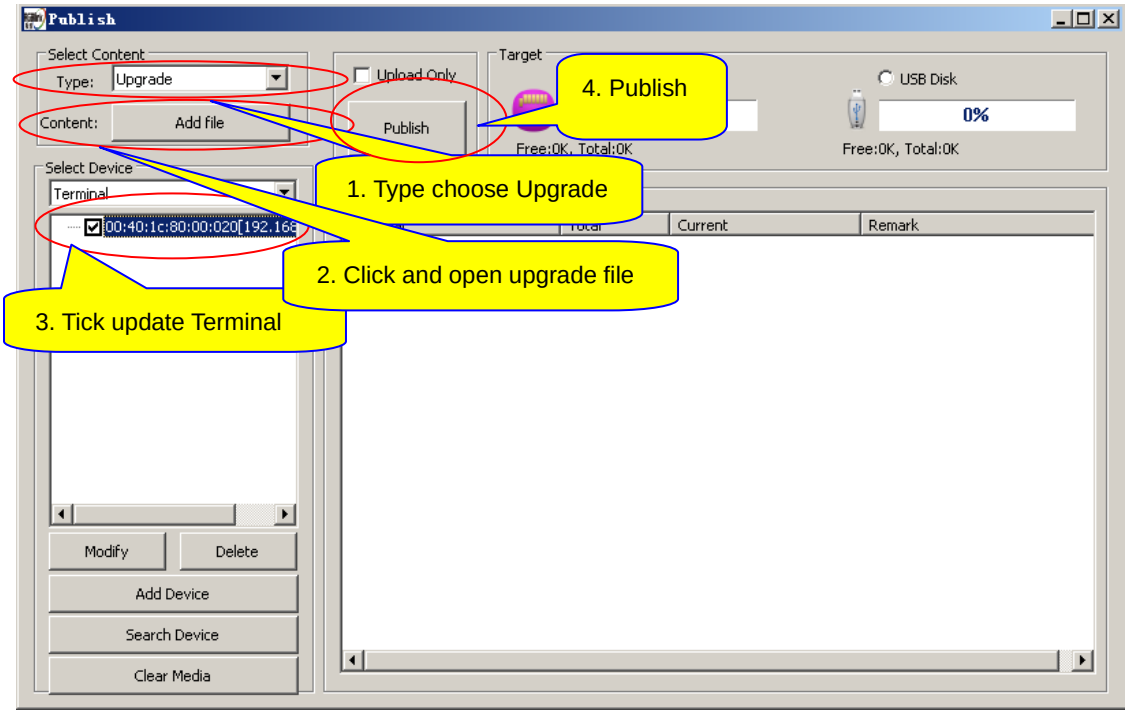
6. System Setup and Operation

How to Edit the Program

12. Publish program to local U disk



12.1 Asynchronous control card upgrade, open the window as follows:



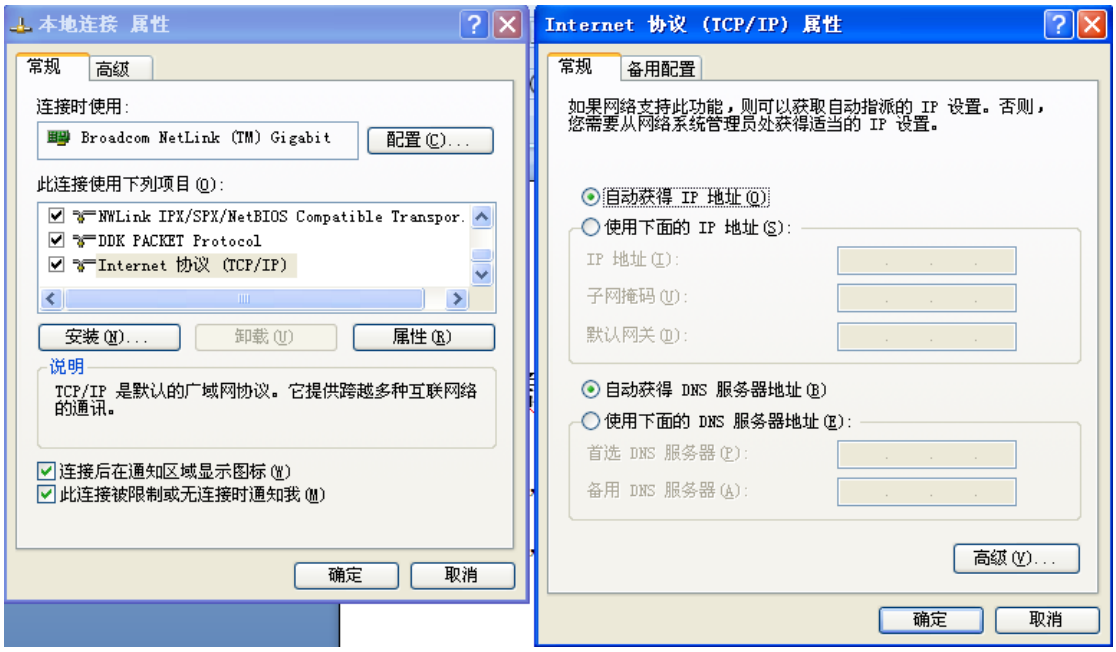
How to Set Router VPN

Here we take VOLANS router VE760w for example, and it is similar to other routers with VPN function.

VPN Server Set Up

1. VOLANS router default gateway is192.168.0.1, default account is admin, and default password is admin.

2. Set local connection to automatically obtain IP and connect to the router.

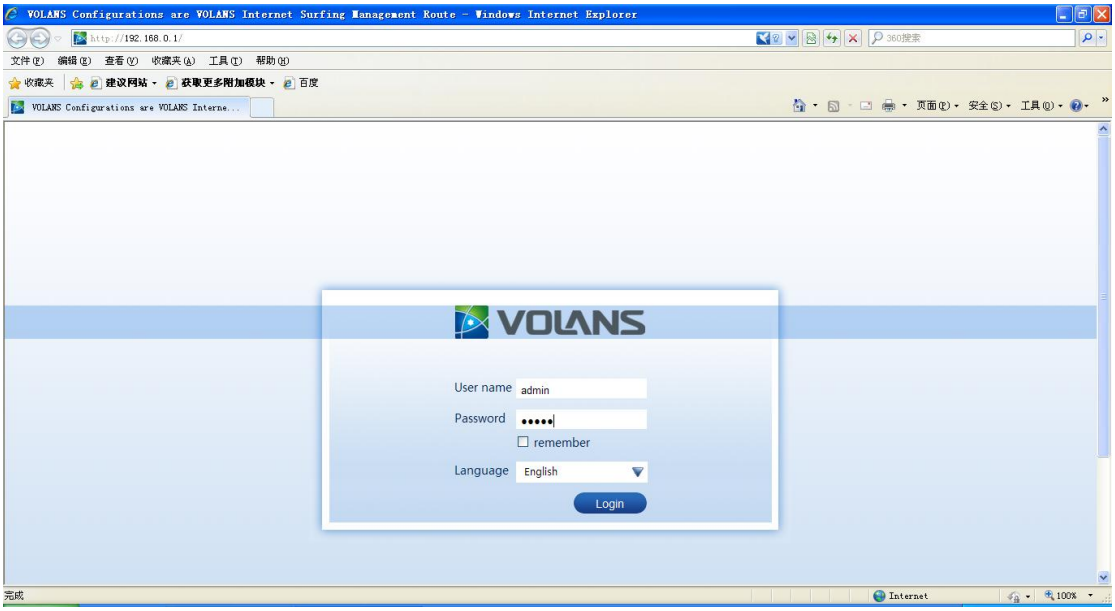


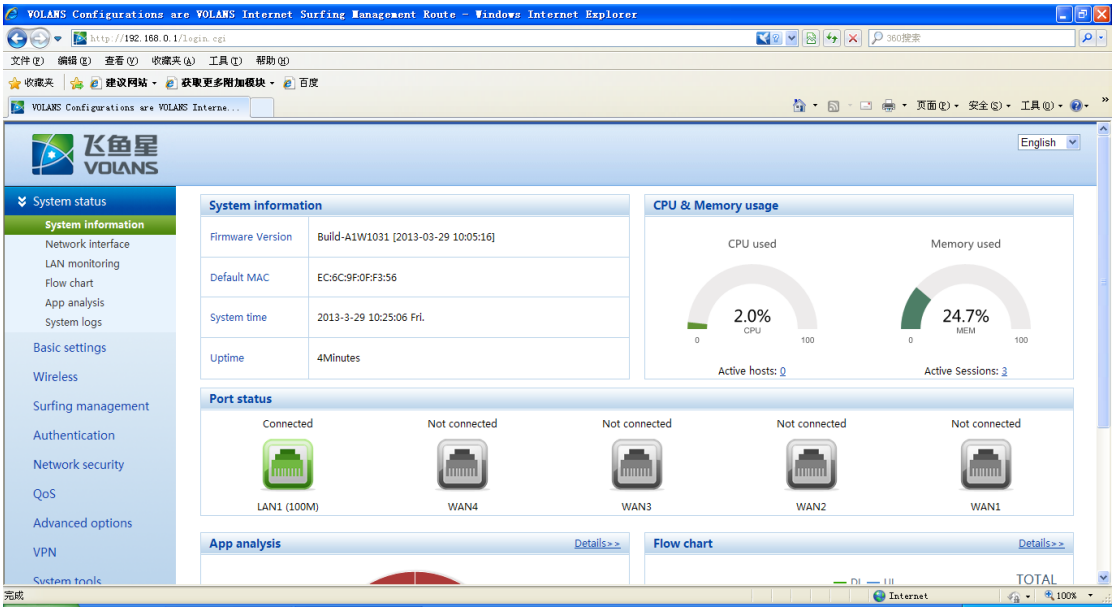
3. After connect successfully, get IP 192.168.0.174.

4. Enter the router IP 192.168.0.1 in browser address bar, then input account admin and password admin in the login window, be sure enter the router setting page.

6. System Setup and Operation

How to Set Router VPN





5. This step depends on the environment set up by router, including:

Environment A router connect to the broadband line

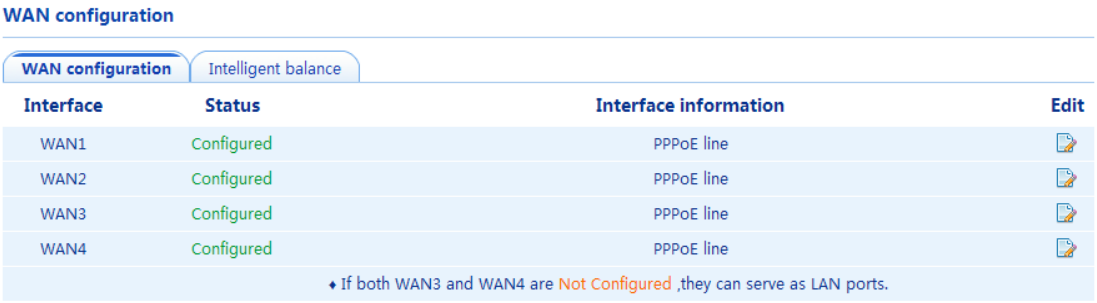
Environment B router set up in the local area network (LAN), and access to the wide area network (WAN).

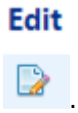
(1) For environment A, it should enter the router's broadband connection setting.

Click the basic setup on the left side - WAN configuration

6. System Setup and Operation

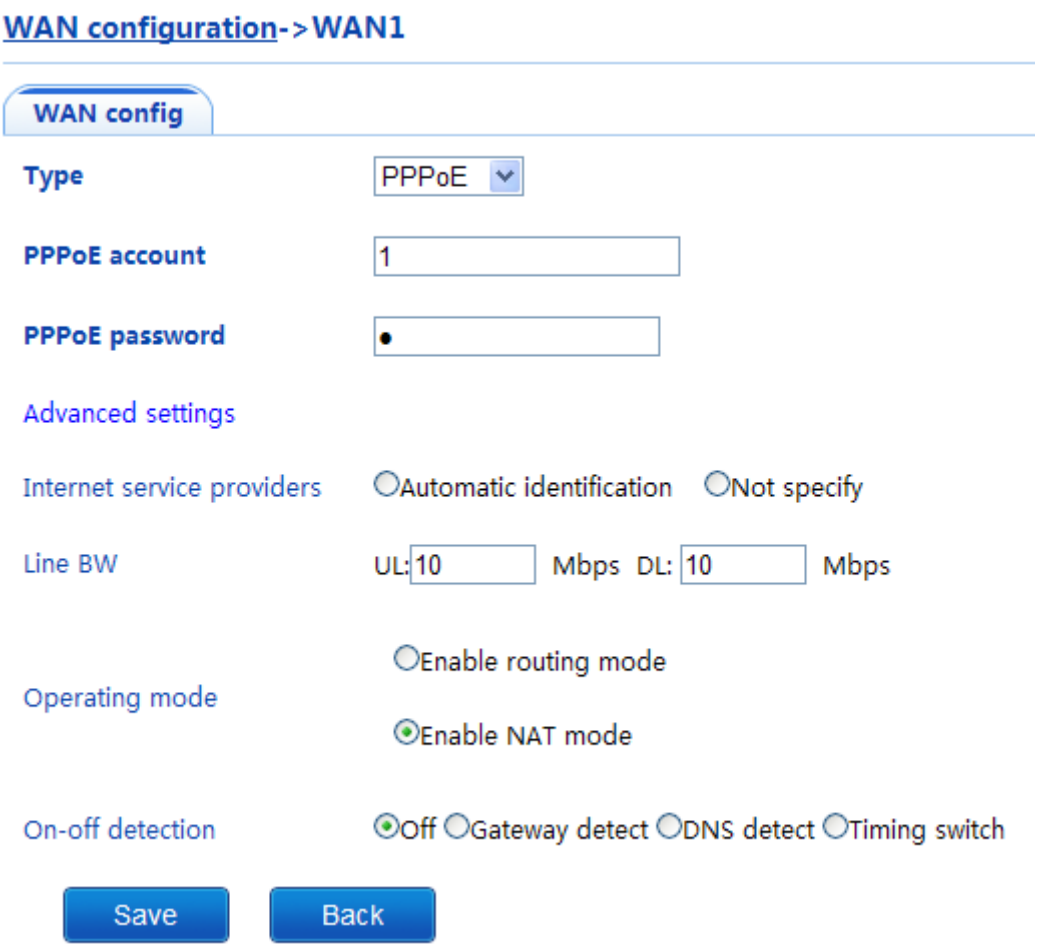
How to Set Router VPN





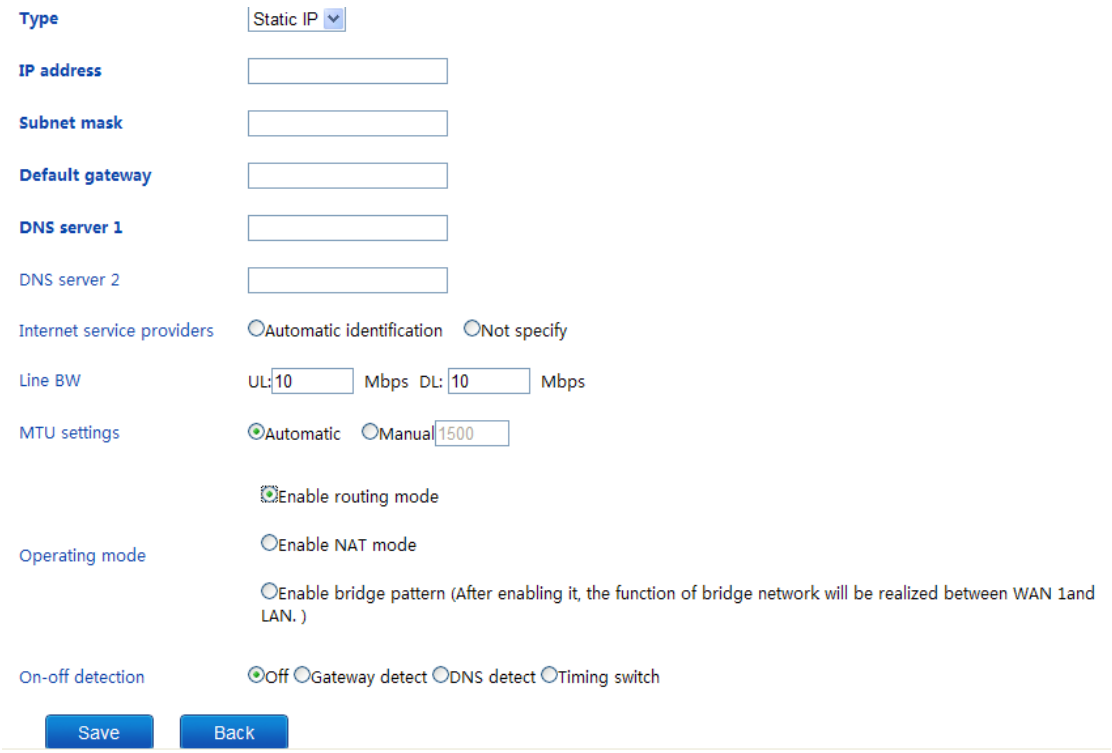
Click WAN1 edit .

Fill in the broadband account and password or static IP address and save, confirm if connected to the WAN.



6. System Setup and Operation

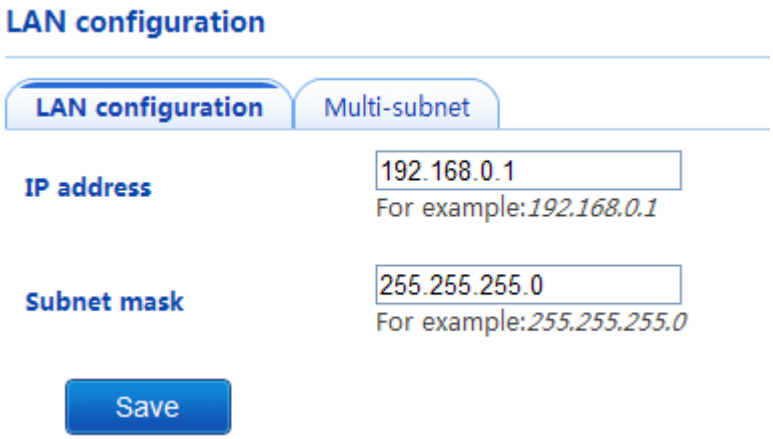
How to Set Router VPN



(2) If is environment B, ignore environment A setting.

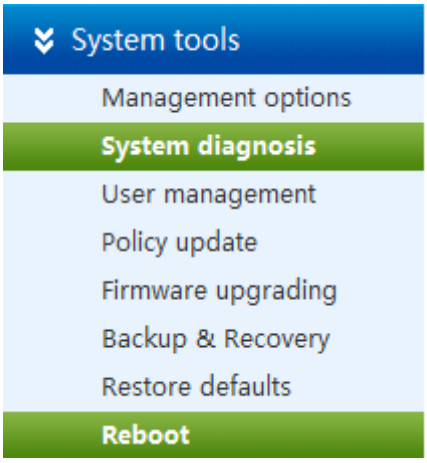
Then VE760w used as child router for switching. The router IP cannot conflict with the IP already set up in the LAN. Need to change the router IP.

Click the basic setup on the left side - LAN configuration, modify 192.168.0.X and save, then reboot the router.

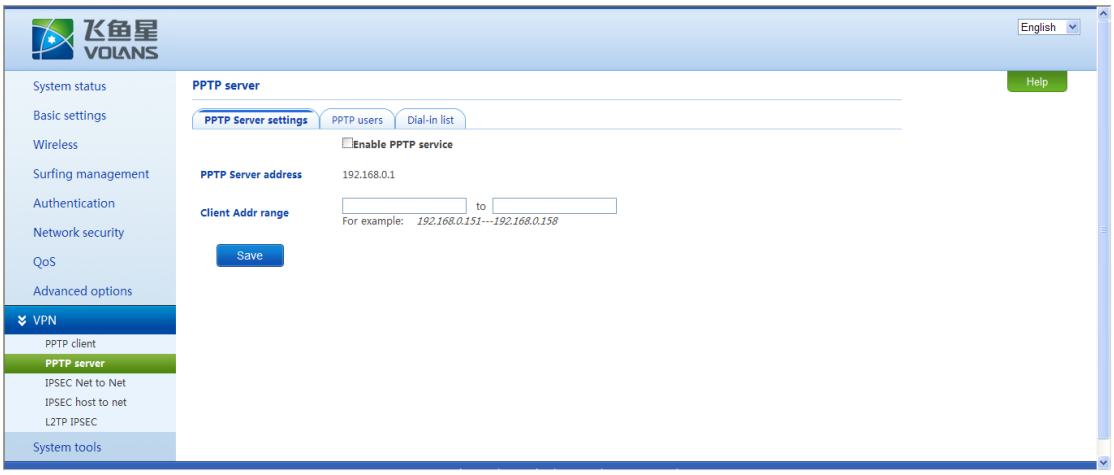


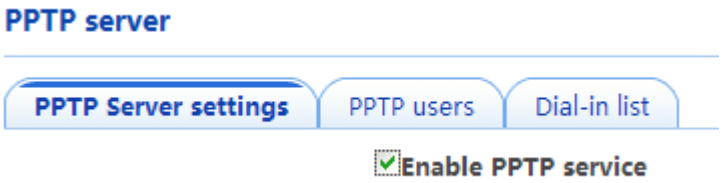
6. System Setup and Operation

How to Set Router VPN



6. Click "virtual private network" on the left side menu--”PPTP server”





Tick and enable PPTP,

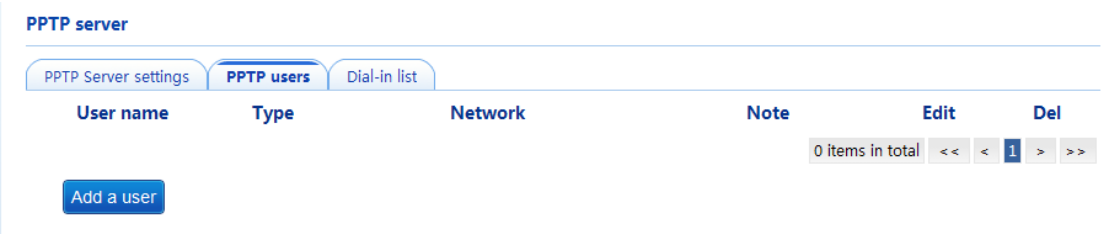
The PPTP client address range should be assigned to the IP address that VPN client dialed, should avoid conflict with other PC user's IP address.

The setting address is

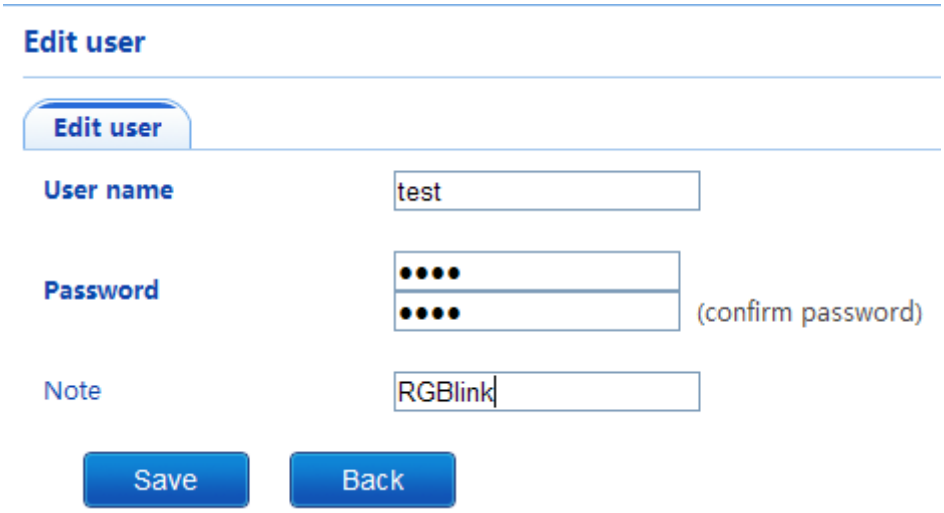
7. Click “PPTP users” after save.

6. System Setup and Operation

How to Set Router VPN



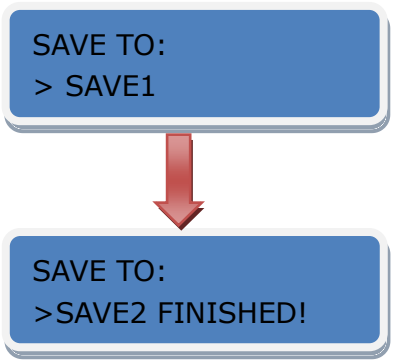
8. Click Add a user, fill in the user name and password (the account and password that necessary for VPN dial-up), and then save.



How to Save the Parameter

Save user mode to the customer for different scene directly call; leave out the edit operation inconvenience, VSP 112W provides ten save preferences.

1. Press SAVE button, the key lights, the SAVE function open.
2. SAVE1, SAVE2, SAVE3 all light;
3. Select the location of the need to save, light touch the corresponding key, such as save to SAVE2, light touch SAVE2 key can complete parameter preservation.



Note

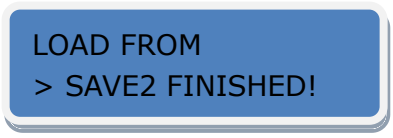
Same as MENU→ SAVE SETUP →SAVE TO

How to Load the Saved Parameter

Save user mode to the customer for different scene directly call; leave out the edit operation inconvenience, VSP 112W provides ten save preferences;

1. Press [SAVE1], [SAVE2], [SAVE3] button to load the saved parameter, for example, load from SAVE2:

2. After about 2 seconds, the LCD shows load finished.



Note

Same as MENU→ SAVE SETUP →LOAD FROM

Usage of SD Card and USB

1.SD Card Interface

SD card input interfacing is mainly used to save video program or program upgrade package.

2.USB1,USB2 Input Interface

USB Media playing input interface could input with USB device or portable hard disc with USB storage function, which is used to store video program package.

3.SD Card,USB1 and USB2 Usage Instruction

Usage instruction 1-SD Card: SD Card is priority to USB,SD card video playing performance is better than USB. When input SD Card and USB in the same time, system will only play SD card program and in the switching channels system will also priority switch to SD Card channel.

SD Card requirements: Max. support 32G, format fat/fat32

Usage Instruction 2-U disk: USB1 is under USB2; USB1 is main input, USB2 is backup input, priority to use USB1

Usage instruction 3-SD Card and U disk priority: When insert SD card and U disk to VSP 112W in the same time, SD is priority to U disk, which mean it will only play SD Card video program

Usage Instruction 4-Support video and graphic format;

Support Graphic format: JPGE, BMP, PNG;

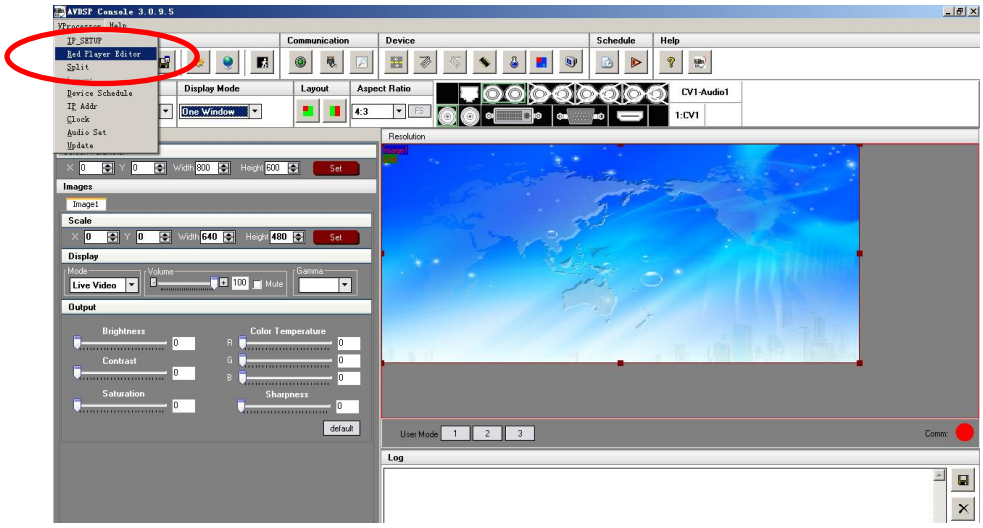
Support video format: MP4, MPEG1, MPEG2, RMVB, MJPG, AVI etc.

Usage Instruction 5-Video source downloading: SD card and USB stored video is from VSP 1123W windows control software 《Red Player Editor》 program editing and releasing

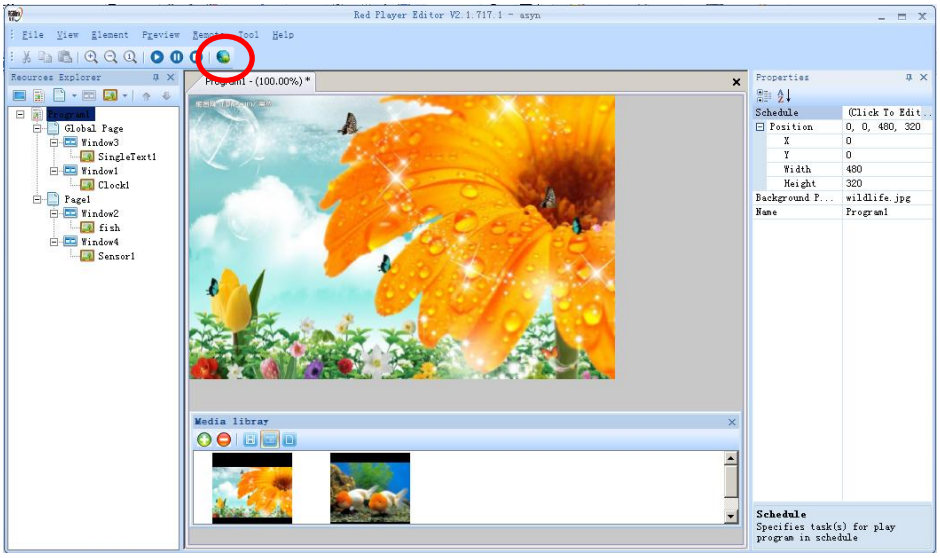
VSP 112W Windows control software;

6. System Setup and Operation

Usage of SD Card and USB



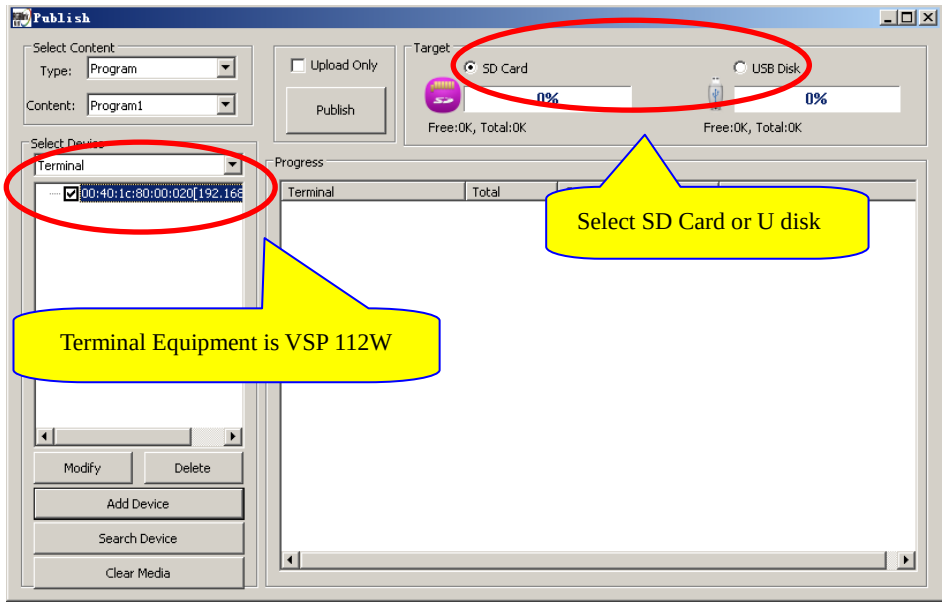
After editing Red Player Editor, release the program;



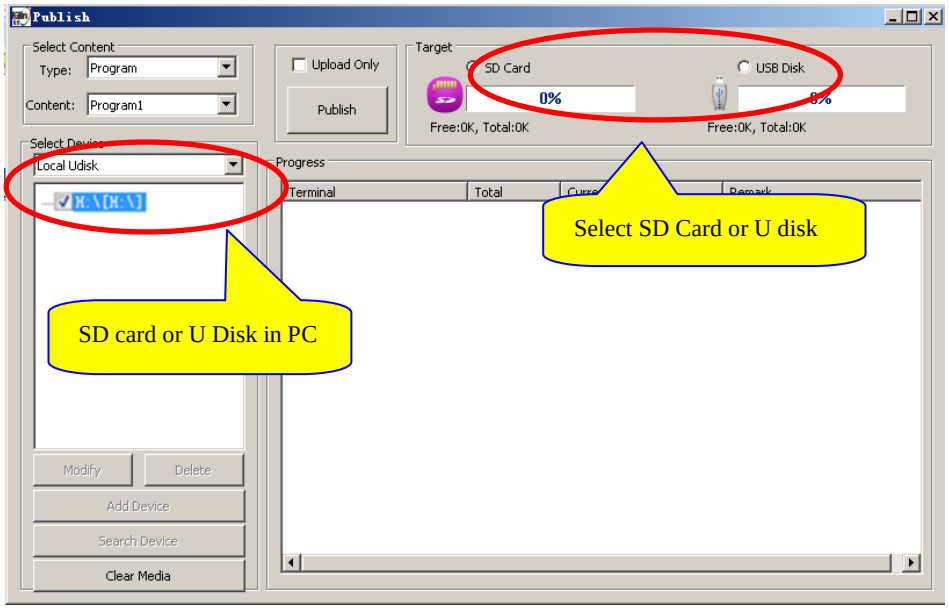
VSP 112W device has connected to SD Card and U disk, Red Player Editor release and store to VSP 112W

6. System Setup and Operation

Usage of SD Card and USB



PC connect to SD card and U disk, Red Player Editor program release and store to SD card or U disk of PC, then Insert SD card and U disk to VSP 112W.



Usage Instruction 6-Program update

If it requires using Red Player Editor to release program to SD card, broadcasting status must be SD card or U disk. For example, if it requires releasing and uploading the program to SD card, device must be playing video program in the SD card, meanwhile upload SD card will update playing program. If program is uploaded to U disk, playing program will not be updated.

When insert SD card and U disk in the same time in playing condition, remove of

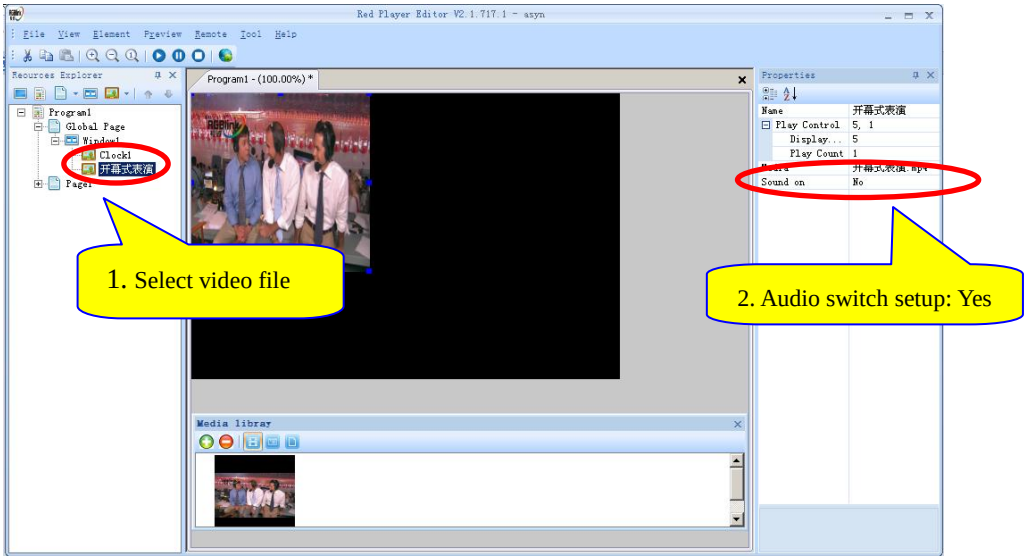
6. System Setup and Operation

Usage of SD Card and USB

USB will not affect present broadcasting, SD card is priority to USB, Removing of SD card will affect present broadcasting, which will need to enter USB menu under MENU to re-identify USB interface and will broadcaste.

Usage Instruction 7-SD card, U disk video's audio

If it requires to play audio in SD card or U disk program source, when requires to edit program, Setup Red Player Editor software video's audio switching as picture shows.



And once again confirm if it I mute or volume adjusting through VSP 112w menu.

Menu----AUDIO

MUTE: Mute switch, selectable to off or on the mute

VOLUME: Volume adjustable in 0-100

AUDIO IN: Selectable on audio input source with IMAGE A main image or IMAGE B sub-image

HDMI: Selectable HDMI audio with INTERNAL or EXTENNAL.

It is also adjustable through windows control software, to set audio.

6. System Setup and Operation

Usage of SD Card and USB

7. Common Questions and Solutions

In This Chapter

This chapter provides the common questions and solution for the video processor. The following topics are provided:

- No Output in LED Display
- Flash Point in LED Display Output
- LED Display only Shows Part of the Image
- No Display in the Second Half Part of LED Display
- Left Screen Appears Two Black Sides

No Output in LED Display

Confirm If There is Any Input Signal

Press [MENU] button to find "INPUT" and knob into the "INPUT RES INFO" to see whether the input signal is normal, suggested the "NO INPUT" signal does not come in, check the front-end signal lines, and please note to do dual display or extended in computer ; you can enter other format signals to view in the same operation.

Confirm If Signal Output

Find a belt VGA input (best for DVI) display, connect to the corresponding output port of processor, and check whether the signal is correct on the monitor. If not display properly, please check whether there is input signal, or if input wire interface is taken tight, output wire interface is picked up tightly. If display normally, check if sending card is normally working or need to replace sending card test.

Flash Point in LED Display Output

Confirm If Monitor Output is Normal

Find a belt VGA input (best for DVI) display, connect to the corresponding output port of processor, and check whether the signal is correct on the monitor. If display normally shows and no flash point, please check whether DVI outlets put tight or replace to DVI line of sending card. If display flashes point, please judge if input signal, wire, and interface are normal.

LED Display Only Displays Part of the Image

Signal Needs to Scale

Press **[SCALE]** button in the processor and knob to adjust the actual screen size of the screen, combined with button **[POSITION]**, including the "width", "height" and "starting position", remember to touch the knob to confirm.

No Display in the Second Half Part of LED Display

Resolution is Insufficient

Please make sure the points of the screen width and height, choose the resolution to be bigger than screen width by button **[MENU]** under OUTPUT RES, and touch knob to confirm.

Sending Card Can not Take Lower Part

TS 802 can control the max horizontal resolution 2048, and vertical resolution 640. Each CAT5 output is 320 pixels.

Left Screen Appears Two Black Sides

Adjust DE Deviation

This phenomenon needs to adjust the DVI output and DE migration of the processor, through the [MENU] to find "OUTPUT" and find the corresponding output name, such as "DVI1 OUT ADJUST", and find "DVI1 DE" again, make an adjustment for corresponding horizontal and vertical DE, please remember to save to the corresponding channel after setting up, save to SAVE1 by default.

A. Specification

BNC Input	
Number of Inputs	2
Supported Standards	PAL/NTSC
Signal Level	1Vpp±3db (0.7V Video+0.3v Sync) 75 ohm
Multiplex	480i,576i
VGA DB15 Input	
Number of Inputs	1
Connector	Standard DB15 Socket
Supported Standard	VGA-UXGA
Signal Level	R、G、B、Hsync、Vsync:0 to1Vpp±3dB (0.7V Video+0.3v Sync) 75 ohm black level: 300mV Sync-tip: 0V
Supported Resolution	1024*768*60, 800*600*60, 640*480*60, 1280*720*60, 1280*800*60, 1280*960*60, 1280*1024*60, 1440*900*60, 1400*1050*60, 1600*1200*60, 1680*1050*60, 1920*1080*60, 1366*768*60
DVI Input	
Number of Outputs	1
Connector	Standard DVI-I socket
Supported Resolution	SMPTE ： 625/25 PAL, 525/29.97 NTSC, 625/50p PAL, 525/59.94p NTSC 1080i50,1080i59.94/60,720p50,720p59.94/60 VESA：800×600×60Hz，1024×768×60Hz，1280×768×60Hz，1280×1024×60Hz， 1600×1200×60Hz， 1920×1080×60Hz，1920×1080×50Hz
Signal Level	TMDS pwl, single pixel input,165MHz bandwidth
Format Standard	HDMI 1.3
USB Input	
Number of Inputs	4
Connector	Standard USB port
Supported Standard	Support general image, audio and video formats
DVI Output	
Number of Outputs	2
Connector	Standard DVI-I Socket
Signal Level	TMDS pw, 165MHz bandwidth
Supported Resolution	VESA: 800×600×60Hz, 1024×768×60Hz, 1024×768×75Hz, 1280×720×60Hz, 1280×720×50Hz, 1280×768×60Hz, 1280×800×60Hz, 1280×1024×60Hz, 1360×768×60Hz, 1366×768×60Hz, 1400×1050×60Hz, 1440×900×60Hz,

	1600×1200×60Hz, 1680×1050×60Hz, 1920×1080×60Hz, 1920×1080×50Hz, 1920×1200×60Hz, 2048×1152×60Hz, 2560×812×60Hz, 2560×816×60Hz
VGA Output	
Number of Outputs	1
Connector	Standard DB15 Socket
Supported Resolution	VESA: 800×600×60Hz, 1024×768×60Hz, 1024×768×75Hz, 1280×720×60Hz, 1280×720×50Hz, 1280×768×60Hz, 1280×800×60Hz, 1280×1024×60Hz, 1360×768×60Hz, 1366×768×60Hz, 1400×1050×60Hz, 1440×900×60Hz, 1600×1200×60Hz, 1680×1050×60Hz, 1920×1080×60Hz, 1920×1080×50Hz, 1920×1200×60Hz, 2048×1152×60Hz, 2560×812×60Hz, 2560×816×60Hz
Signal Level	R、G、B、Hsync、Vsync:0 to1Vpp±3dB (0.7V Video+0.3v Sync) 75 ohm black level：300mV Sync-tip：0V
Function	
Input channel configuration	Support each input channel signal programming configuration
Throughout the year timing	Support throughout the year month, week, day time
Extras	
Communication	LAN, front panel and PC software
Power Supply	85-264V 2.1A IEC-3
Working Environment	0°C~45°C
Stored Environment	10% to 90%
Product Warranty	3-year parts and labor warranty

Supported 3G USB Adaptor, WIFI and VPN Router List

For the 3G wireless USB network module, we comments to use the following models:

1. Huawei E1750/E1550 (WCDMA);

2. ZTE AC581 (CDMA2000);

3. Huawei E169 (CDMA2000);

4. ZTE AC8710 (CDMA2000);

5. ZTE MU351 (TD-SCDMA).

For the WIFI USB module, we comments to use the following models:

1. TP-LINK TL-WN321G;

2. TP-LINK TL-WN321G+;

3. TP-LINK TL-WN322G+;

4. ASUS WL-167g;

5. TOTOLINK N500UA;

6. OPPO AK093;

7. EDUP N8508.

For the VPN router, we comments to use following model:

1. Netcore NR255 or NR266;

2. VOLANS VE760W or 982W.

SER510R/T Brightness&Temperatures Integration Sensor Specification

SER510R/T Introduction

SER510R/T is the intelligent sensor controlled by single chip microcomputer, it can measure the brightness and temperature of the current environment, and output through the digital interface, combined with RedPlayerLED display control system, it can realize the brightness automatically adjustment, also, energy saving effect is remarkable. It has its own characteristics that high reliability, high precision, and adapt to a wide range, it can also works long hours in harsh environments.

Typical application: environmental brightness temperature monitoring, LED display screen brightness automatic controlling, intelligent building lighting temperature controlling, etc.

SER510R/T Features:

● Use digital sensor with high precision, ensure the measurement precision.

● Temperature sensor adopts thermal conductive silicone to fix to the aluminum alloy case, ensure measure the real temperature.

● Use aluminum alloy casing and high strength transparent plastic cover shell, solid and reliable.

● Use professional seal water treatment, meet IP67 standard

● SER510R is standard RS - 232 interface, SER510T is TTL level interface.

SER510R/T Technical Indicator

	Minimum Value	Maximum Value	Typical Value	Note
Working Voltage	+4.2V	+12V	+5V	
Working Current				Measure when work under +5V
Temperature Measurement Range	-40℃	120℃		
Temperature Measurement Precision			0.5℃	
Brightness Measurement Range	0lx	216262lx		
Brightness Measurement Precision			3lx	
Measurement Period			1s	
Working Temperature	-40℃	120℃		
Storage Temperature	-55℃	140℃		

Cable Length		15m	5m	
Protection Grade	IP67			

SER510R/T Communication Protocol

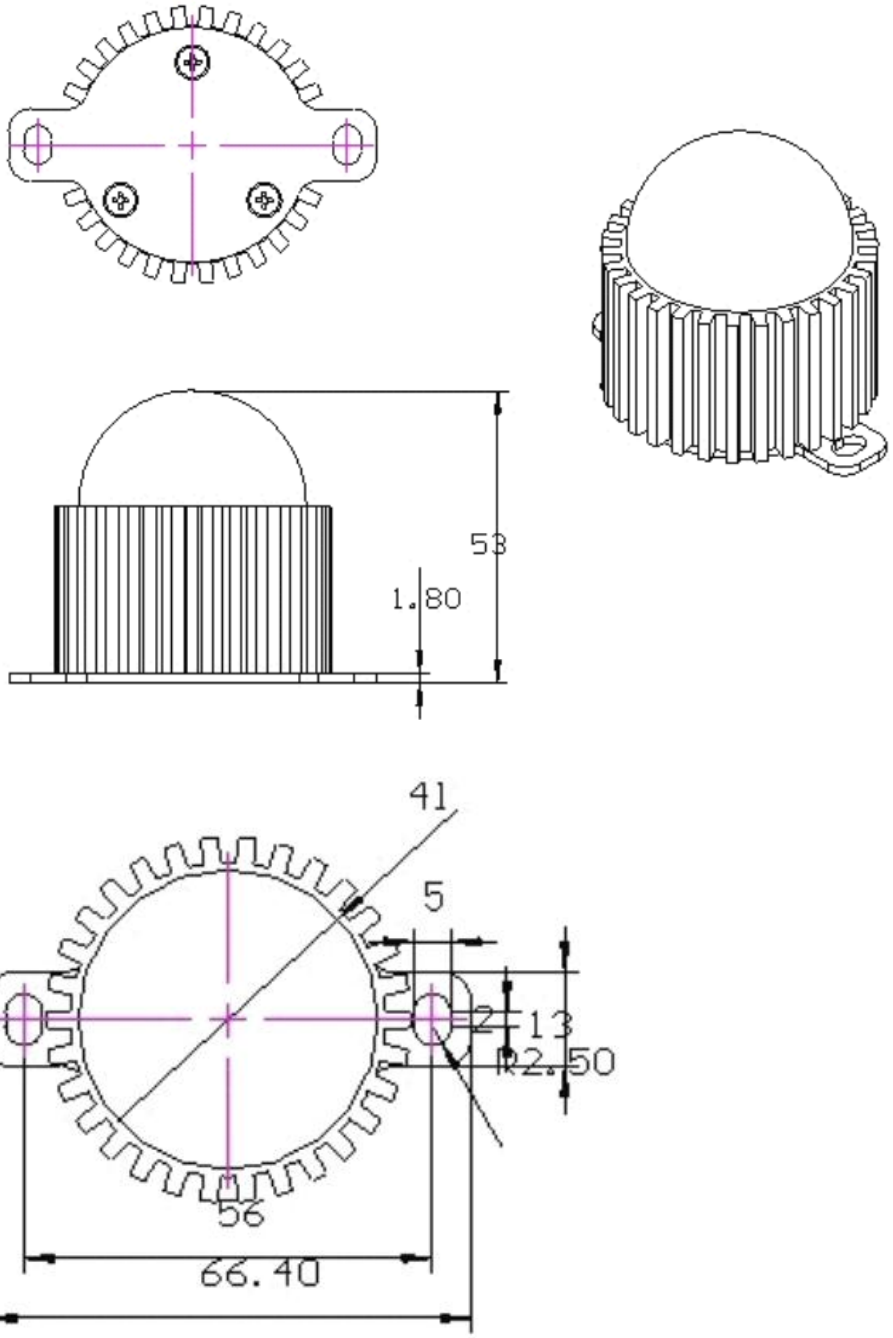
1. SER510R/T adopts standard DB9 interface, with serial asynchronous communication mode, baud rate is 9600, start bits is 1, data bits is 8, 1 stop bits is 1, no parity bit.
   Pin Description: 2------->TXD
   3<-------RXD
   5<-----> GND
   7------->VDD+5V

2. Data protocols, the sensor will send the brightness and temperature that collected every second, the formats are as follows:

Header (12 bytes)	Effective Brightness	Brightness	Effective Temperature	Temperature	Checksum
E5 B2 41 FF 02 00 0A 00 73 6E 72 3A	1 byte	2 bytes	1 byte	2 bytes	2 bytes

Header is for fixed 12 bytes
Effective Brightness: 01: Effective brightness
00: Invalid brightness
Brightness: High byte front, low byte behind, attenuation coefficient of the cover is about 3.3.
Maximum value of brightness: FFFE, and FFFF means brightness is overflow.
The brightness value of the sensors return multiplied by 3.3 is the current unique degree of brightness (lx).
Effective Temperature: 01: Effective temperature
00: Invalid temperature
Temperature: High byte front, low byte behind. Integer part of temperature is divide the value by 10, and the decimal part is remainder. The highest bit is 1 when the temperature is below zero, and the unit of the temperature is Celsius degrees.
Checksum: Including all the header bytes plus 1.
Data example:
E5B2 41FF0200 0A00736E 723A0107 C6010136 8AFA
E5B2 41FF0200 0A00736E 723A0107 5C010133 F7FA

SER510R/T Dimension and Installation



B. Contact Information

Warranty:

All video products are designed and tested to the highest quality standard and backed by a full 3-year parts and labor warranty. Warranties are effective upon delivery date to customer and are non-transferable. RGBlink warranties are only valid to the original purchase/owner. Warranty related repairs include parts and labor, but do not include faults resulting from user negligence, special modification, lighting strikes, abuse(drop/crush), and/or other unusual damages.

The customer shall pay shipping charges when unit is returned for repair.

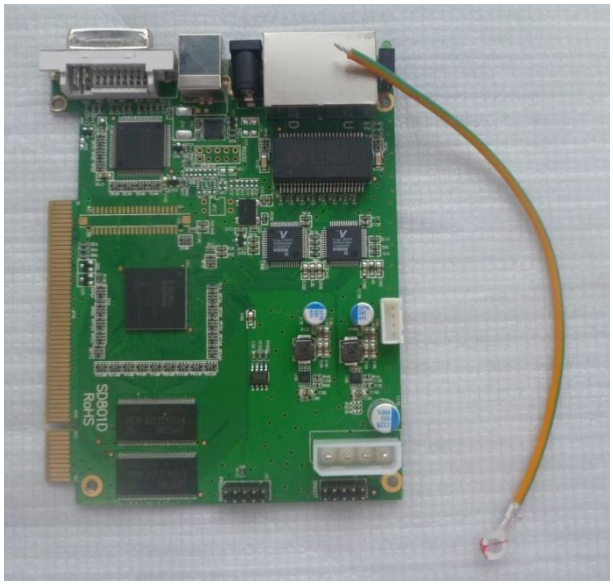
Headquarter: S603~604 Weiye Building Torch Hi-Tech Industrial Development Zone Xiamen, Fujian Province, P.R.C.

- **Tel:** +86-592-5771197
- **Fax:** +86-592-5771202
- **Customer Hotline:** 4008-592-315
- **Websites:**
  - ~ http://www.rgblink.com
  - ~ http://www.rgblink.cn
- **E-mail:** rgblinkcs@gmail.com

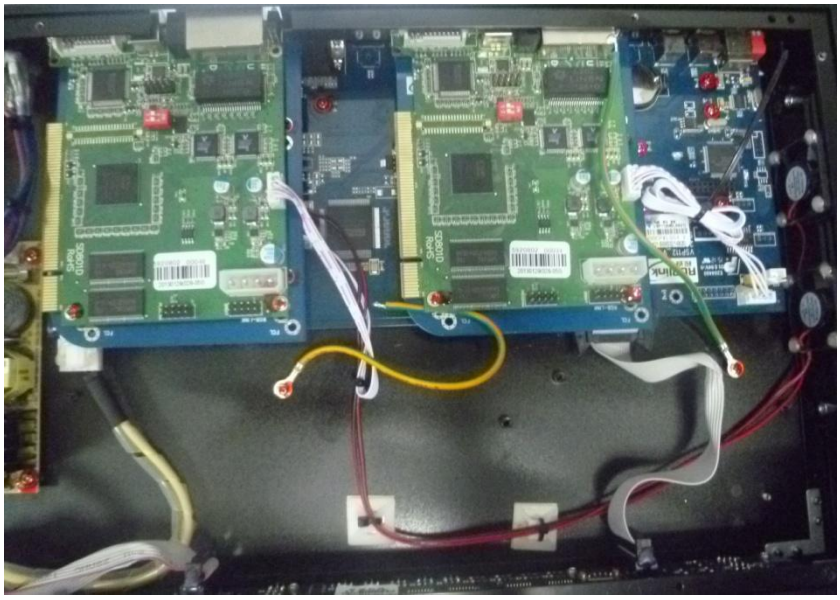
C. Sending Card Wire Bonding Steps

Here we suggest connect the sending card to the grounding line to prevent the sending card is burned, specific steps are as follows:

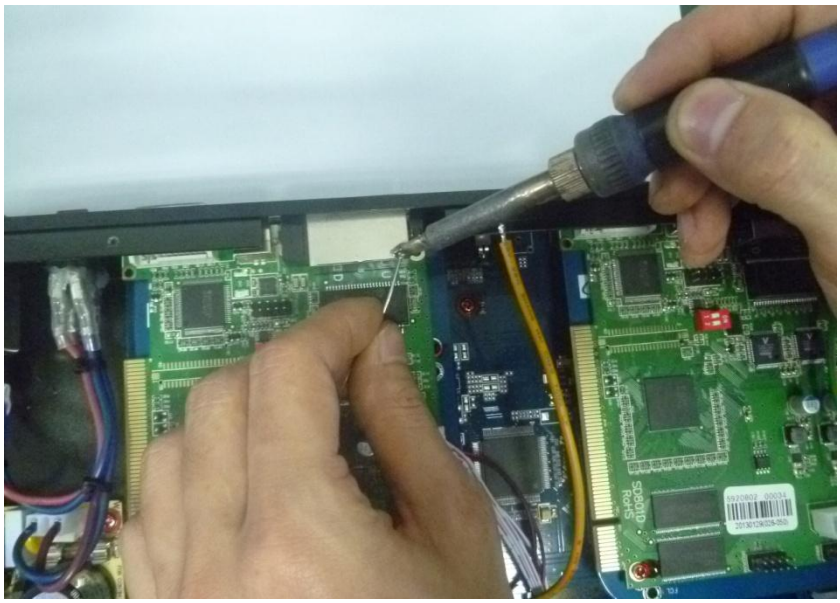
Confirm the sending card and ground wire before welding, shown as follows:



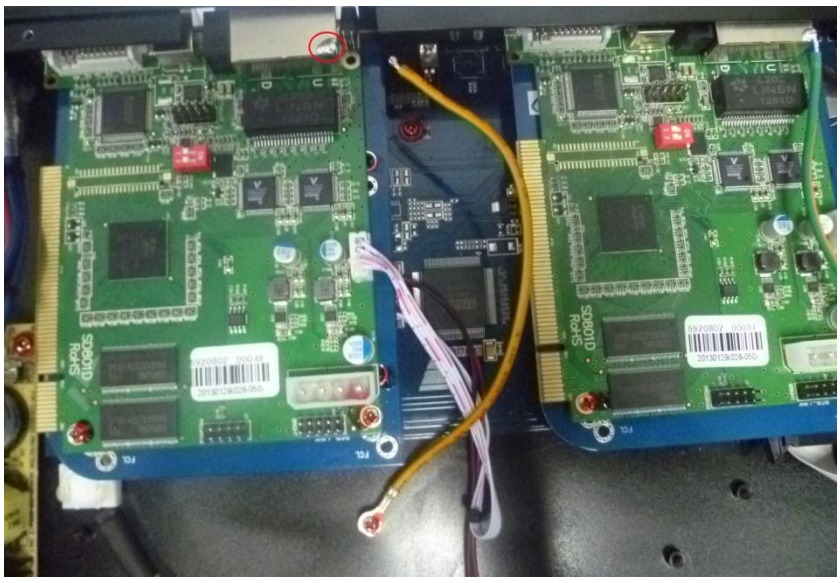
1. Open the top cover, after apart, you can see the yellow earth wire and sending card position as follows:



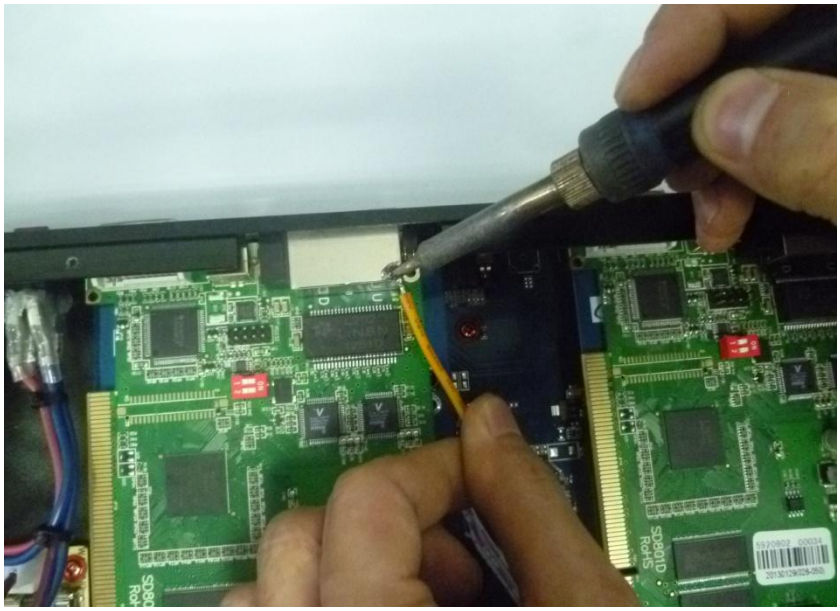
2. Bonding on the sending card metal shell, the position is shown in figure:



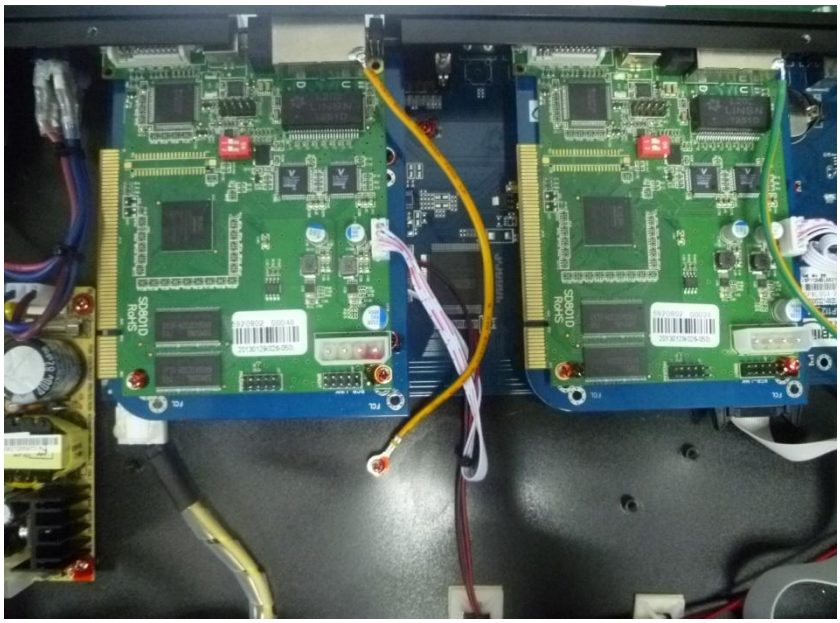
3. The picture after bonding is shown as follows:



4. Welding the end that not fixed of the earth wire to the soldering position.



5. The picture after bonding is shown as follows:



6. After bonding, lock the top cover.